# Automation

Fully integrated automation of all operations including production management on PLC with HMI, full traceability and warehouse management on native software, total information exchange with SQL database and weight control in real time



























Bakery 8 Biscuits

Confectionery

Pasta & Cereals

Daii

Premix

Baby food & functional food

Pet food

Beverages

Chemica

CEPI provides a turn-key system that includes the automation. Hardware and software design is done completely in-house, and each system is the result of a decades long experience of parallel development alongside the mechanical side. With a team of 24 programmers, we provide technical and human continuity through the development of a project that can become highly specific and complex. Our solutions provide full horizontal and vertical integration, managing dialogue and data received by other partners operating in the lines, after the dosing and before the raw ingredients management.

For the management of production operations, different HMIs are provided to match diverse needs:

- Personalized 4-15" touch panel on Siemers or Allen Bradley platform, for non-typical processes
- CEPI native PLC Leonardo for typical processes
- Weighing processor WP140 with LCD display for simple one line productions
- · Local control box for weight control in real time

For the management of process data, CEPI native Tracking System software provides:

- Full traceability
- Warehouse management
- Total information exchange with SQL database
- Communication with ERP / MES

The automation team provides full 24/7 support which includes:

- testing, optimization, start-up and training
- remote support on all tools with live visualization on VPN network
- remote management of production and intervention on the source code
- virtual and personalized tutorials
- live assistance with dedicated devices
- support from local teams who are fully trained in our devices and are part of our global network



# **Automation**

# **Traceability**

#### Operator panel

#### Software

PLC with HMI
Production management
Recipe management
Ingredient and hopper parametrization
Overview

Touch panel 4 - 15" Siemens Touch panel 4 - 15" Allen Bradley PC Mobile device

Leonardo 15" (CEPI native PLC)

WP140 LCD Display (Electromechanical automation)

Weight control in real time

Local control box with HMI

Control cabinet

Communication

Statistic report

Remote support

Traceability
Process control
Warehouse management
Material flow

Storing and recipe data history
Batch report
Material consumption report
with dynamic visualization
Digitalization with barcode system

Information exchange

SQL database Available for queries from a third party

Communication with ERP / MES
Remote support



# Touch panel



#### **Personalized PLC**

4 - 15" Siemens and Allen Bradley platforms Production management, recipe management, synoptic overview, ingredient and hopper parametrization PC and mobile device





#### Leonardo

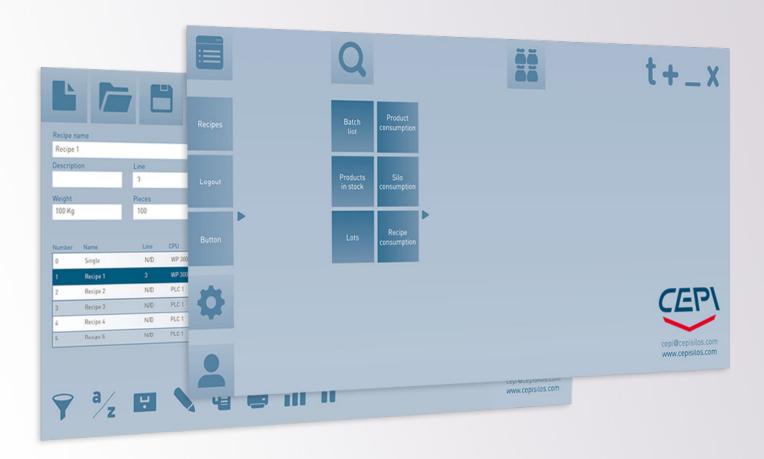
15" CEPI native PLC Production management Standard production processes

#### **WP 140**

HMI with LCD display Production management 1 line



# **Native software**



#### **CEPI Tracking system**

Traceability
Process control
Warehouse management
Material flow

Storing and recipe data history

Batch report

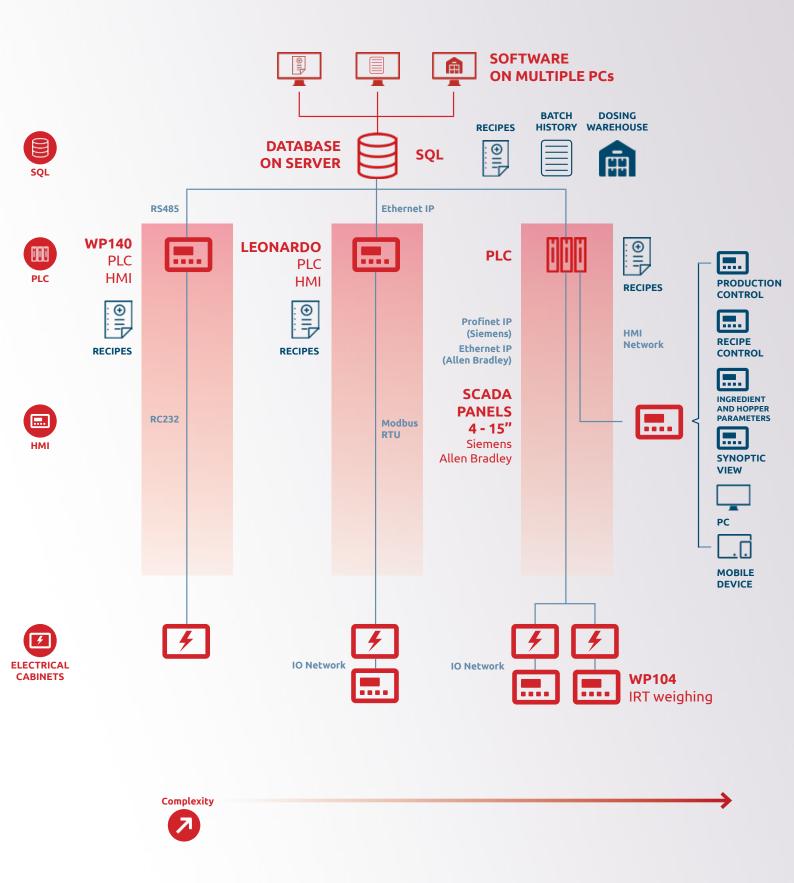
Material consumption report with dynamic visualization

Digitalization with barcode system

Information exchange
SQL database
Available for queries from a third party system
Communication with ERP / MES
Remote support

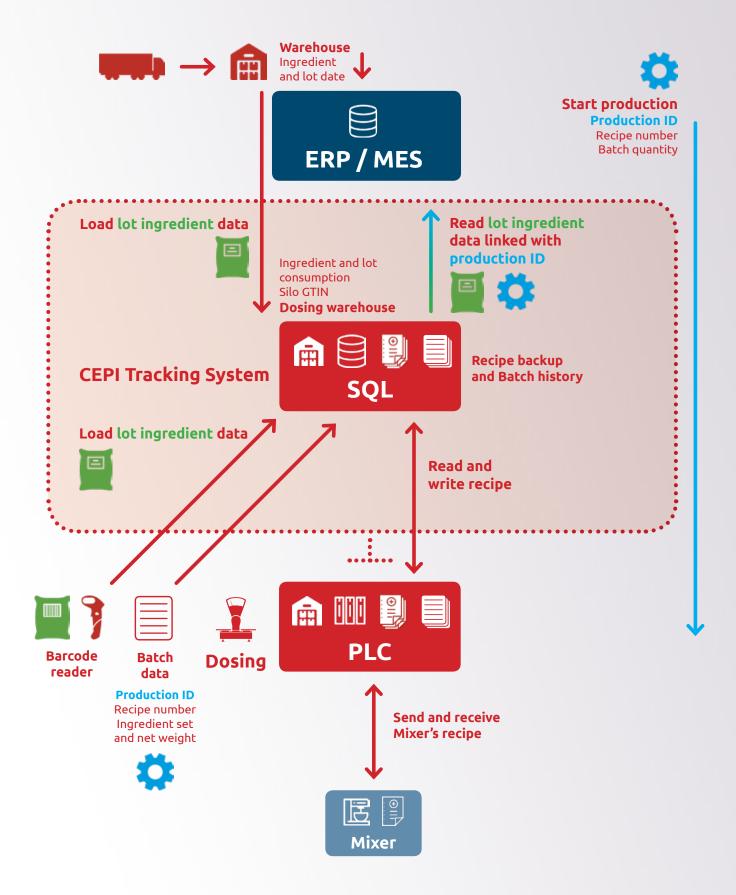


# Architecture of the automation system





# Architecture of the traceability operations







Touch panel managing fermentation line

Touch panel managing continuous microingredient dosing



Three dosing lines for powders and liquids with touch panel managing each line



# Automated dosing system: flavor and efficiency

Fragrance, taste and integrity: an automatized management of dosing processes ensures a final product of high quality and unique flavor. Controlling parameters such as temperature, pH and atmosphere is necessary to preserve the properties of the ingredients, with an accurate and repeatable recipe producing high volumes of food with unchanged flavor.

The design of the dosing system is a complex process that requires detailed information that goes beyond the purely technical, and involves all departments from werehouse to marketing. With repeatability, traceability and precision in mind, detailed information is needed about raw materials and consumptions, the building, humidity and temperature effect, cross contamination, as well as other concerns such as sustainability.

CEPI has refined this process across decades of experience, and will ask all the right questions to design a system that not only fits the individual needs of each process, but will easily accomodate future expansions. The adavantages of our automated dosing system:

- Repeatability and accuracy of recipe
- High quality product and unique flavor
- Traceability of materials and processes
- Higher production volumes
- Improved working conditions
- Less human error
- Enhanced communication with other software and ERP
- Higher hygiene with total separation between production and warehouse
- Reduced consumptions, powders and pollutions
- Space optimization in the production area and the warehouse
- Easy to adapt or expand including the addition of new ingredients due to the flexibility of the process

















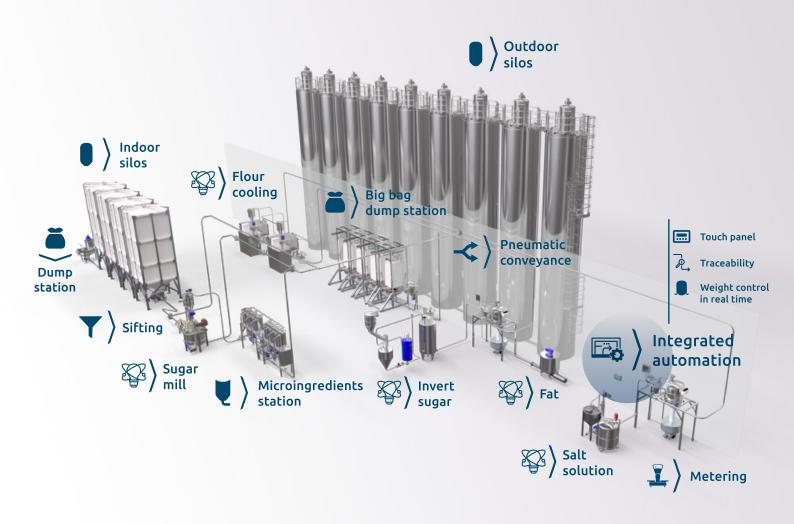


### heart of technology



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# Bulk-handling systems for the food industry since 1985



**STORING** 









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