










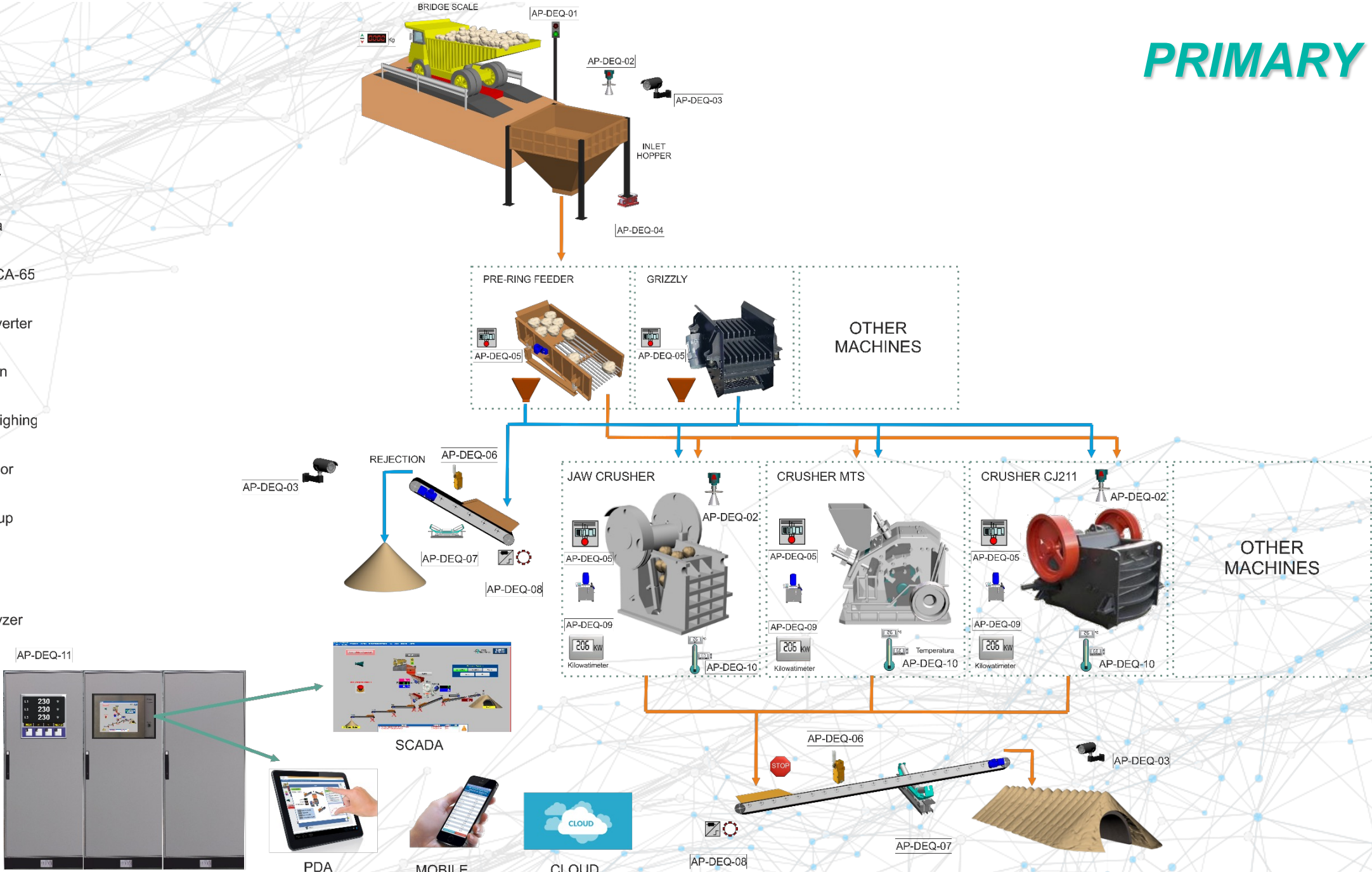


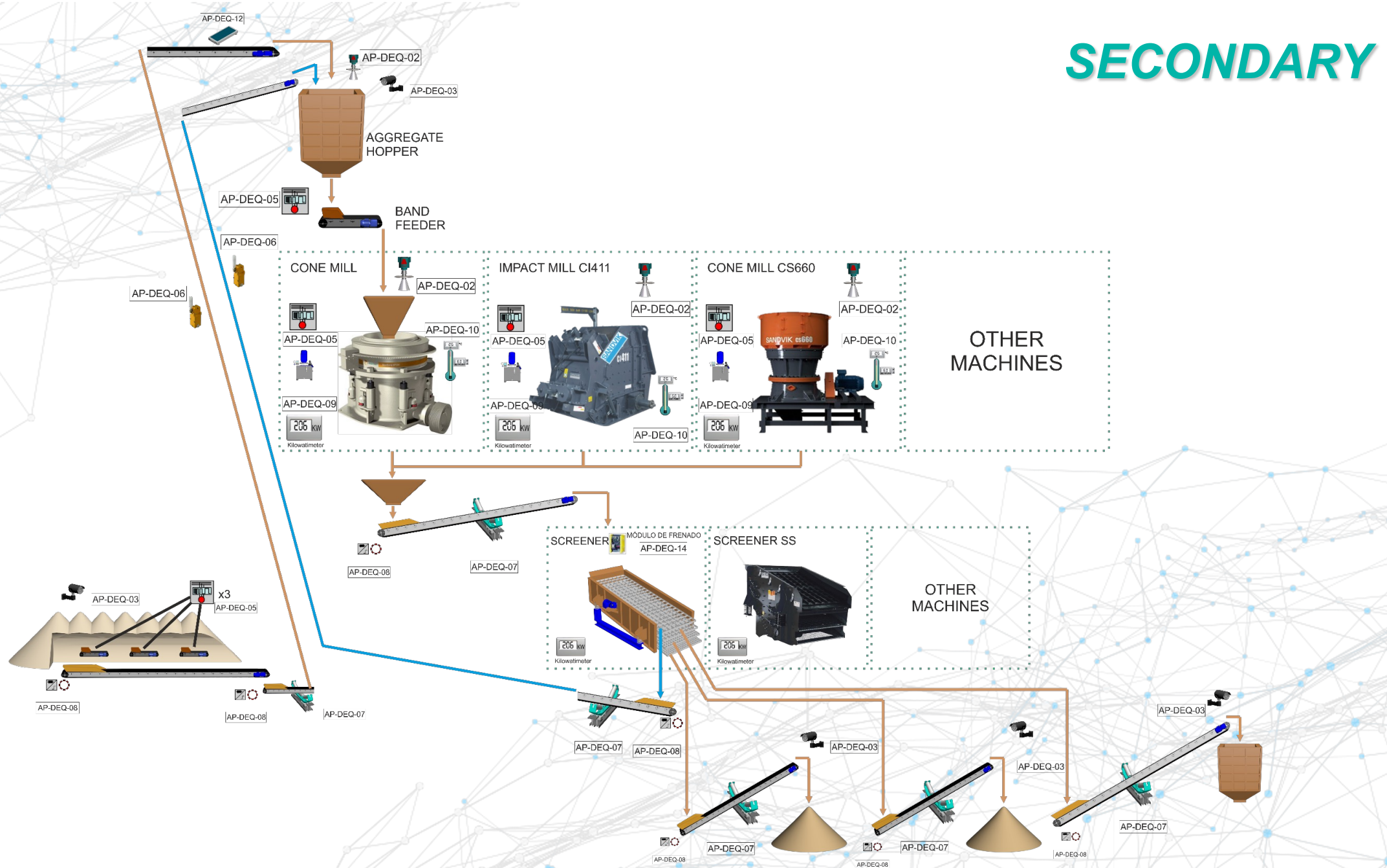
Automatisation of an aggregates' treatment plant



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101003750

-  **AP-DEQ-01:** Traffic lights
-  **AP-DEQ-02:** Radar Sensor
-  **AP-DEQ-03:** Vision camera
-  **AP-DEQ-04:** Load cell CDCA-65
-  **AP-DEQ-05:** Frequency inverter
-  **AP-DEQ-06:** Band deviation
-  **AP-DEQ-07:** Integrated weighing
-  **AP-DEQ-08:** Rotation sensor
-  **AP-DEQ-09:** Hydraulic group
-  **AP-DEQ-10:** Temperature
-  **AP-DEQ-11:** Network analyzer



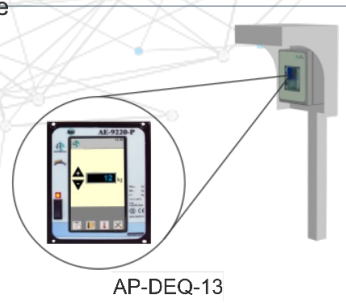




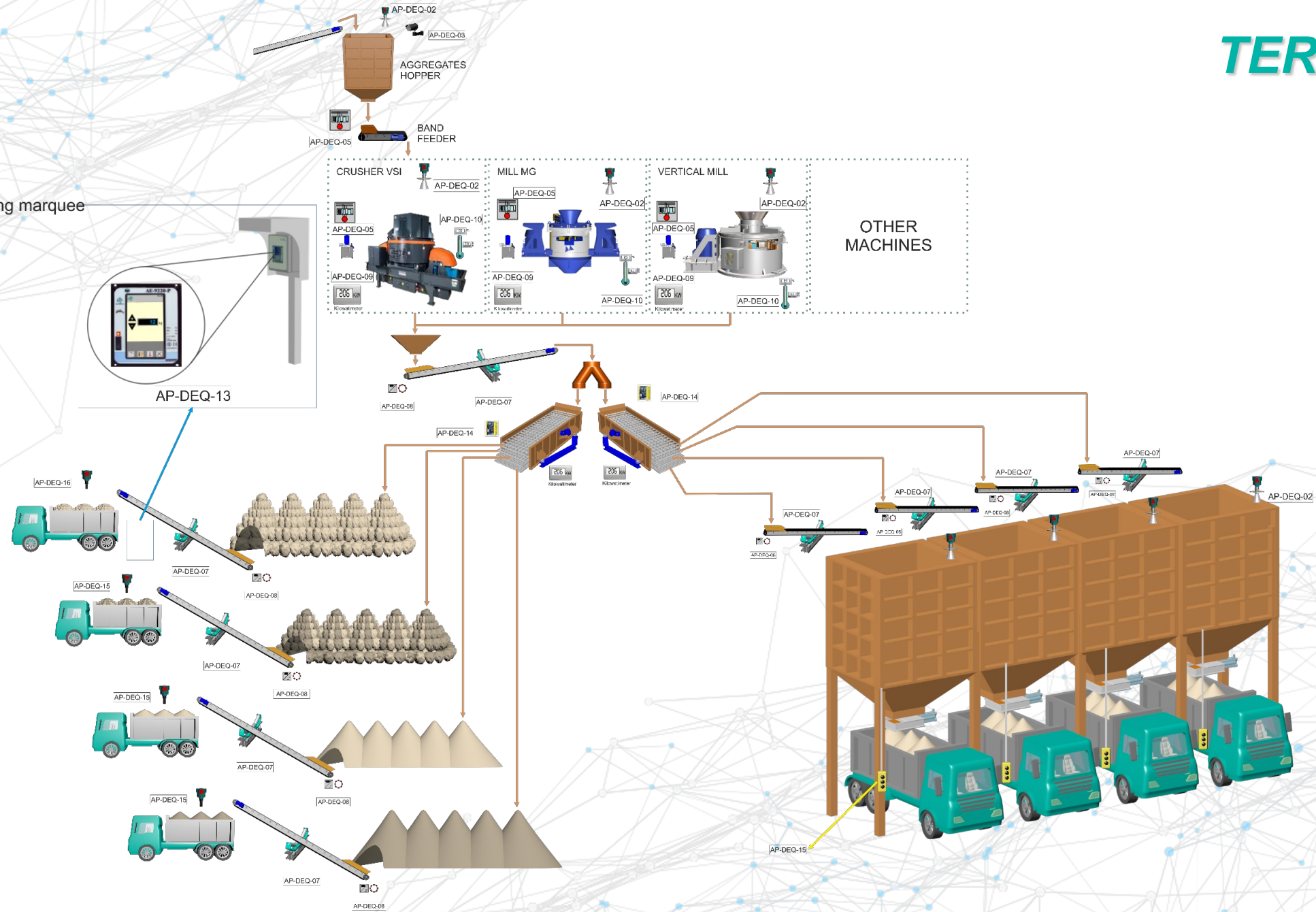
AP-DEQ-13: Self-loading marquee



AP-DEQ-15: Keypad



AP-DEQ-13



3. Applications

PRIMARY

SECONDARY

TERTIARY

AP-DEQ-01: Traffic lights

Signage, notice, permission to use. It is linked to the actual capacity of the hopper to give the vehicle unloading permission.



AP-DEQ-02: Radar sensor

Detection of volumetric material to determine the capacity of the hopper. Data to be linked to the traffic light and the time of use to the mill.



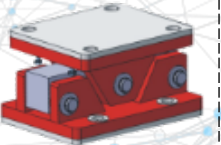
AP-DEQ-03: Vision camera

Vision of volume. Determine the capacity by defining the contour.



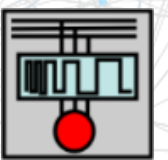
AP-DEQ-04: Load cell CDCA-65

Weight detection in large volume hoppers. Range up to 250 tons with application similar to Vision Camera and Radar Sensor.



AP-DEQ-05: Frequency inverter

Control of the feeding of the material to be able to establish the speed of the material that leaves the hopper towards the mill. It can be proportional based on the power consumed by the receiving element. Linked to the weighing bridge measurement (integrated weighing).



GENERAL USES BLOCK IN PRIMARY

3. Applications

PRIMARY

SECONDARY

TERTIARY

AP-DEQ-06: Band deviation

Detection of improper operation of the transport appointment. It is linked to lateral displacements. Activation time parameterization. It transmits the warning and if it is redundant, the stop with alarm is carried out.



AP-DEQ-07: Integrated weighing

Control of production at the different points of transport by conveyor belts. Performs static weighing measurement and belt speed measurement.



AP-DEQ-08: Rotative sensor

Confirmation of operation of a conveyor belt for the expected speed. If a stop occurs, it warns and signals it by means of an alarm.



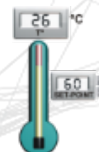
AP-DEQ-09: Hydraulic group

Hydraulic drive element for mill cylinders and centralized greasing in certain machines. It is used as an accessory in hydraulic cylinders.



AP-DEQ-10: Temperature

General control where there is a requirement for a temperature alarm.



GENERAL USES BLOCK IN PRIMARY

3. Applications

PRIMARY

SECONDARY

TERTIARY

AP-DEQ-11: Network analyzer

General electrical network (voltage / voltage. KW). ENERGY EFFICIENCY based on hours.



AP-DEQ-12: Metal detector

Protection against ferrous pieces with determination of size prior to entry into the mill.



AP-DEQ-13: Self-loading marquee

Protection for self-loading equipment of materials. From the vehicle, the driver selects the tons to load linked to an integrated weighing.



AP-DEQ-14: Braking module

Auxiliary for use in screens with asymmetric stop and avoid final “jumps” during the stop.



AP-DEQ-15: Keypad

Auxiliary for self-loading of materials by time in large storage hoppers. Download times can be determined. This system is valid in products where the material flow is constant.



4. Complements

INDUSTRIAL WEIGHER FEEDER - ALPES

Feeder whose main function is the continuous supply and dosing of material for high precision and regularity of mixing processes. It allows the optimization of processes by reducing stop times and belt speed.

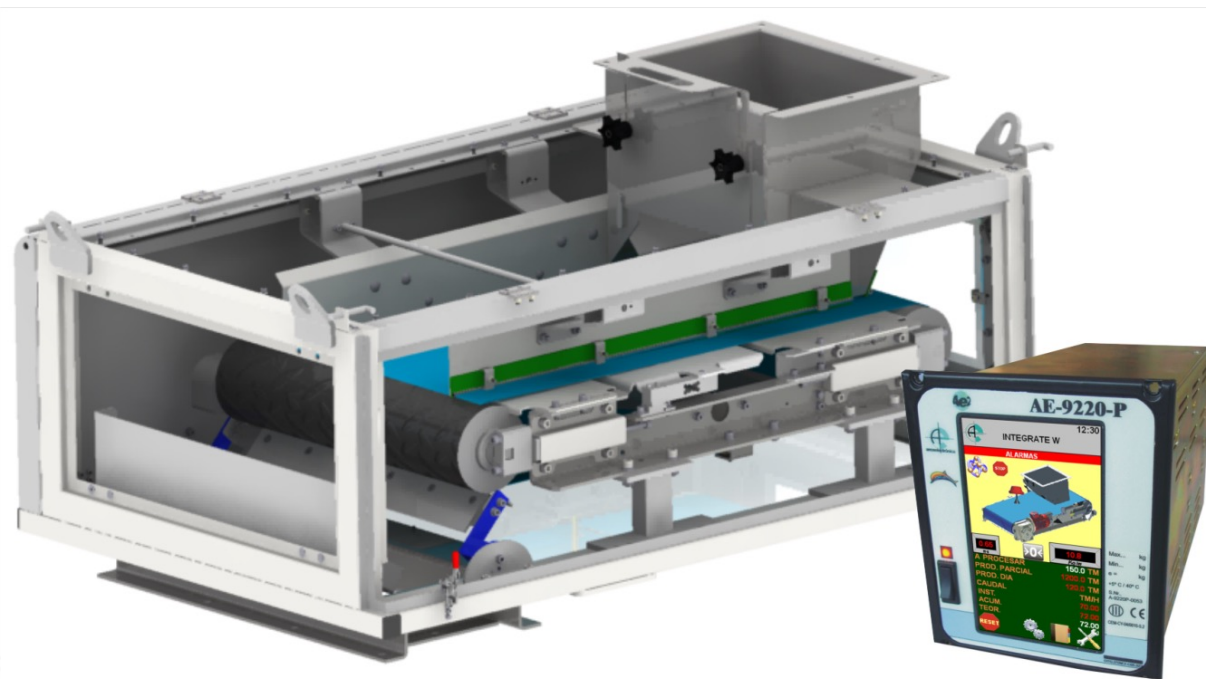
Some of its main features are:

- High accuracy.
- Easy installation.
- Easy cleaning.
- Wide range of productions.

Application sectors:

- Sands.
- Aggregates.
- Cement.
- Lime.
- Mortar.
- Plasters.

* Possible application study on demand.



4. Complements

AUTOMATED TRUCK ACCESS BRIDGE SCALE MANAGEMENT

The ARCO WEIGHBRIDGE program fully automates the access control of trucks to the plant, as well as their weighing in weighbridges, digitization of license plates and management of delivery notes.

In its implementation, the particularities of each project are taken into account and it is integrated into the infrastructure already existing in the company.

Some of its main ADVANTAGES are:

- Eliminates the need for an operator in the weighing center, operating 24 hours / 365 days.
- Reduction of costs and waiting times with a solution monitored in real time.
- Greater control of vehicles and drivers, as well as cargo.
- Automatic delivery of delivery notes.
- It carries out the weighing and the plant entry permit in a completely automatic way.



4. Complements

BIG BAGS FILLING SYSTEM

Automatic filling systems for Big-bags with 4 handles with open mouth / loading mouth, adapted to the specific needs of each sector. We offer different degrees of automation depending on the required features.

- Preselection of quantity in kg based on the receiver element.
- Compact installation to guarantee minimum maintenance.
- Ergonomic design for a comfortable, fast and safe operation.
- Different types of dosage depending on the product to be handled.
- Extraction of the Big-bag can be manual by means of a bull / wheelbarrow or automatic with a roller conveyor.
- Filling solutions for materials with regular, irregular, powder flow and low granulometry.

Automatic model



Manual model



5. Processed products

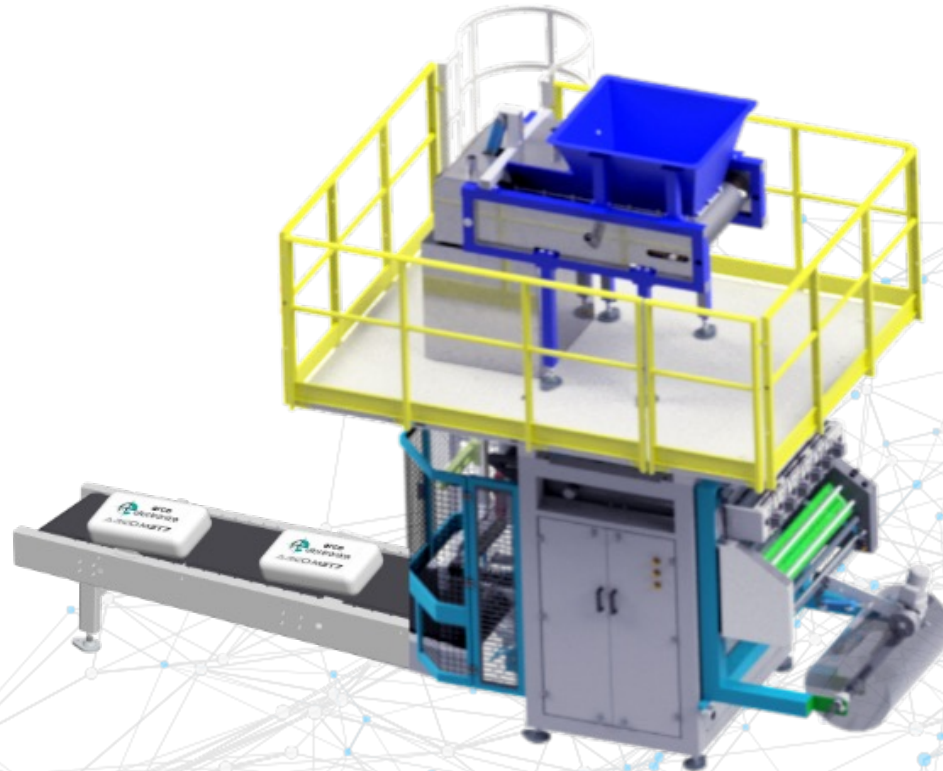
CONTINUOUS BAGGER

Bagging machine for filling polyethylene / polypropylene bags, thermowelded with granulated products such as:

- Sands, silica, mortar, gravel, micro concrete.
- Fertilizers, peat, pellets, fertilizers.
- Perlite, detergent, rice.
- Seeds, feed, pellets, granules.

It incorporates as main elements:

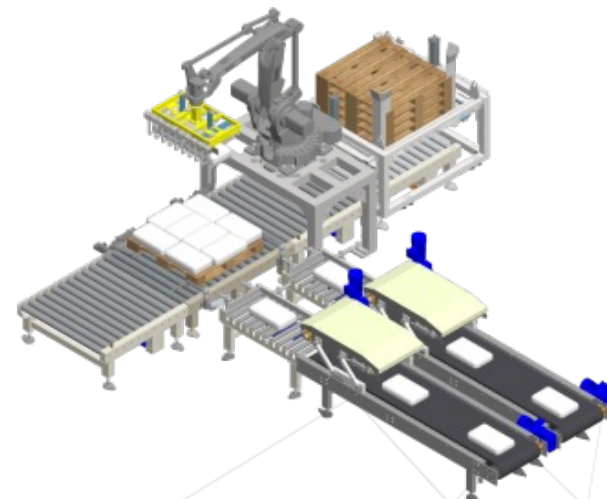
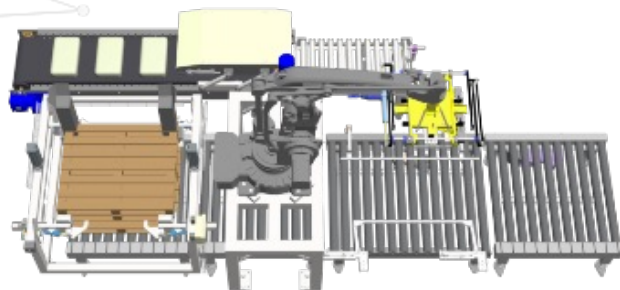
- Cold rolled profile frame and sheet steel.
- Steel bag shaper.
- Horizontal and vertical welding groups.
- Horizontal welding controlled by servo motor.
- Film transmission and drag zone.
- Automatic detection of the end of the coil.



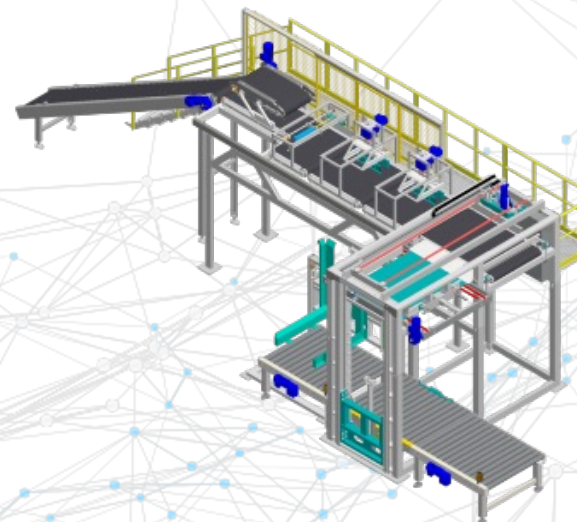
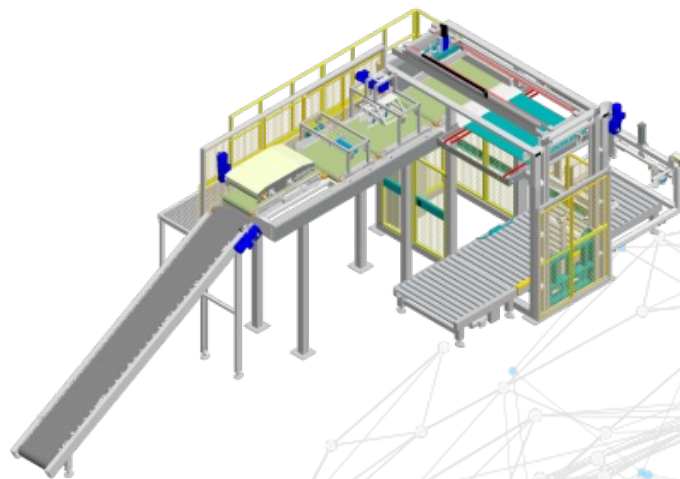
5. Processed products

COMPLETE PALLETIZING LINES

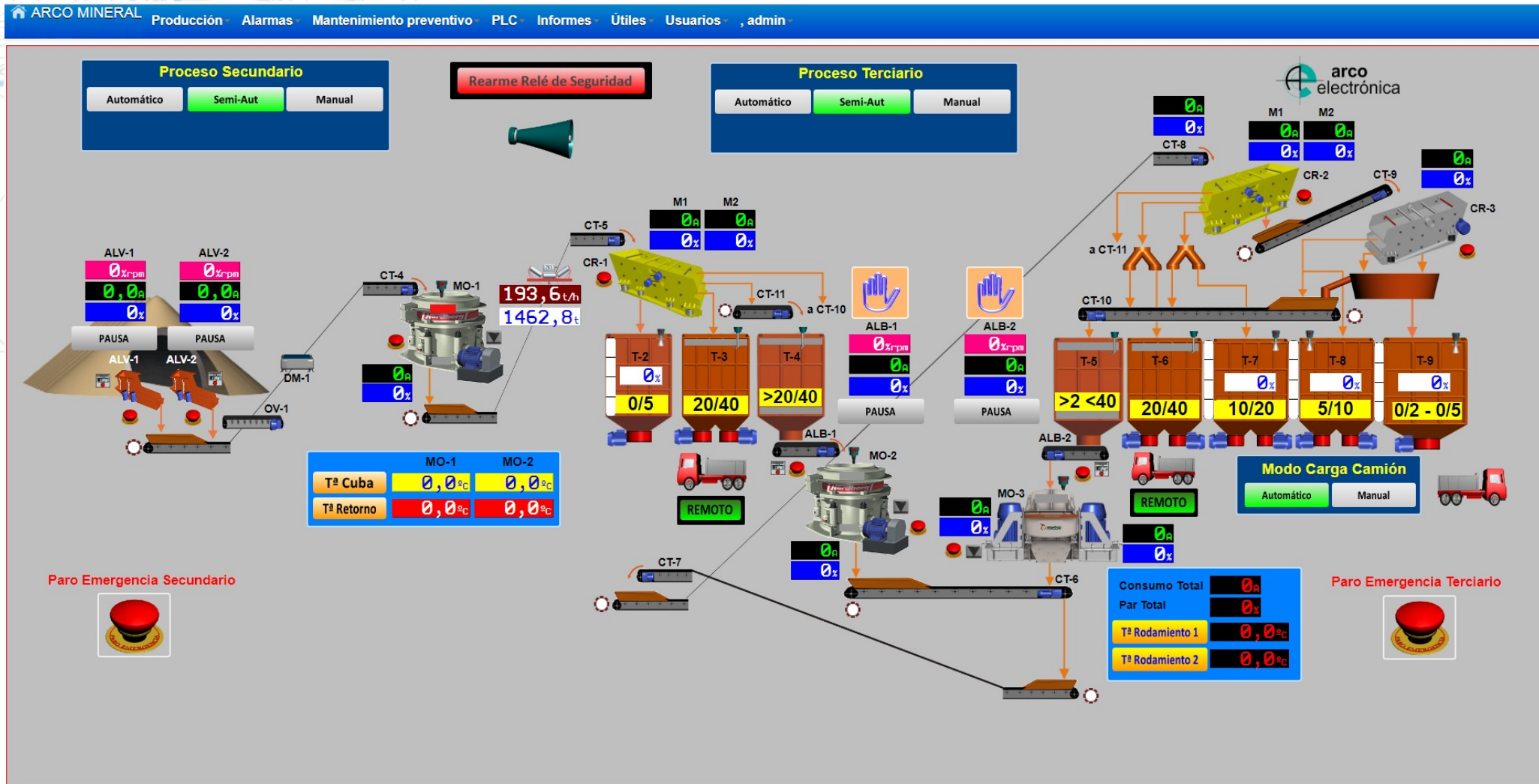
- By robot for any type of installation.



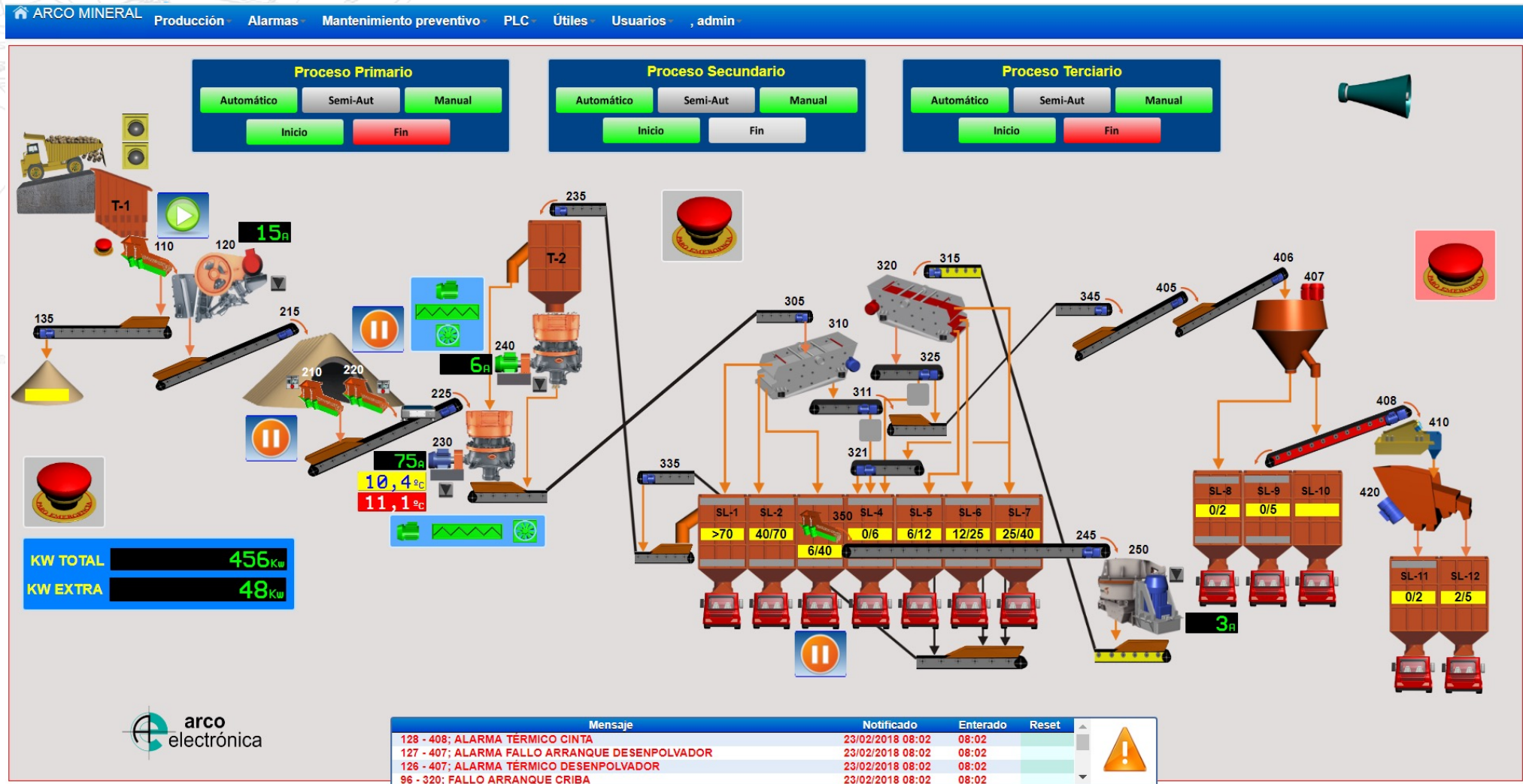
- High level palletizer for large and medium productions.



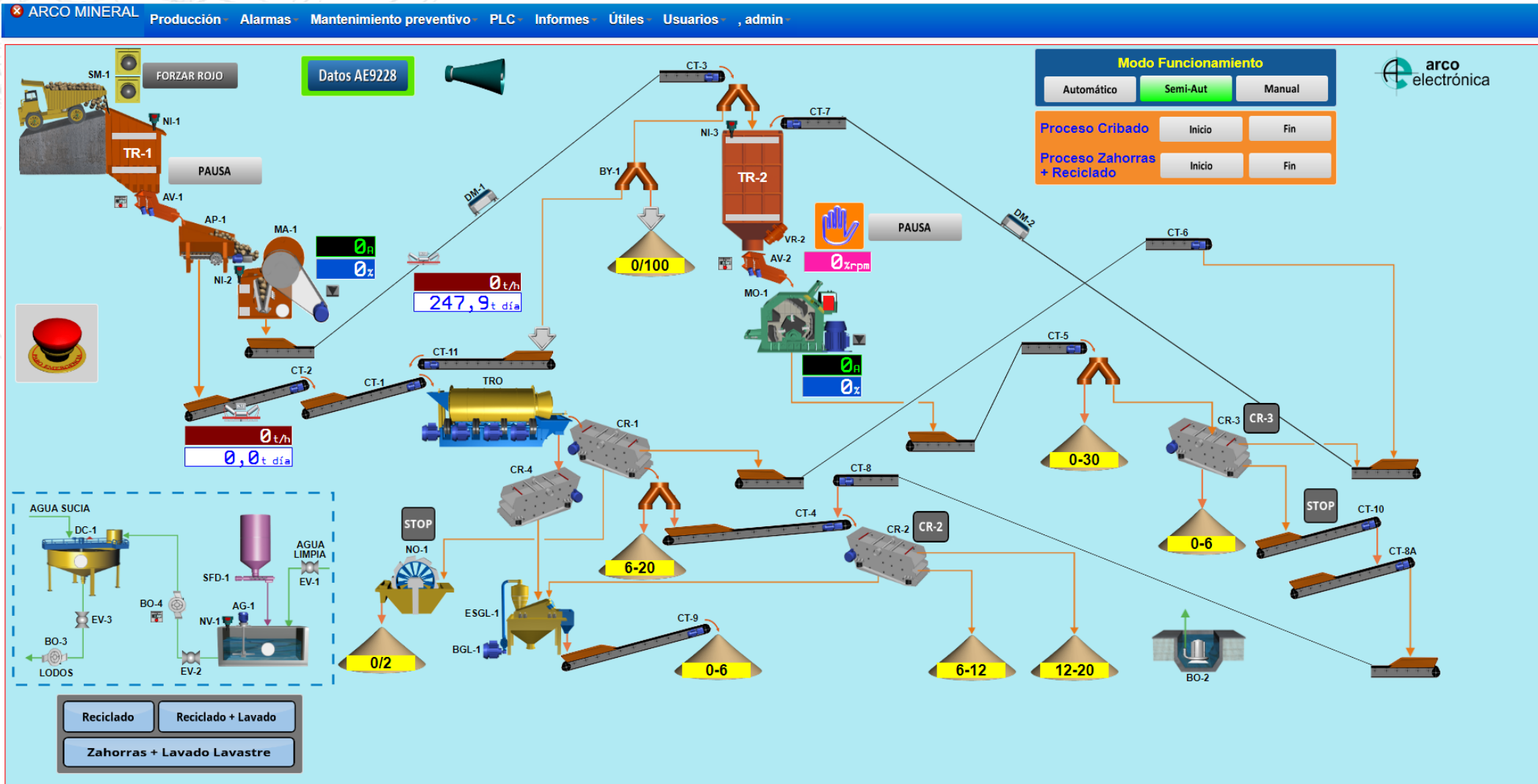
6. SCADAS



6. SCADAS



6. SCADAS



Questions, contacts



Pol. Ind. LA CUESTA I
C/ Castilla-León 5-7
La Almunia de D^a Godina
ZARAGOZA (ESPAÑA)

Teléfono: +34 976 81 90 10
Fax: +34 976 81 26 54
arco@arcoelectronica.es
www.arcoelectronica.es

