

PicoV7 MC

concreting sector

Touch screen + PLC automation system for the production of compacted cement

INTRODUCTION TO THE SYSTEM

The TOUCH SCREEN+PLC system is designed to meet the needs of COMPACTED CEMENT batching plants (version MC).

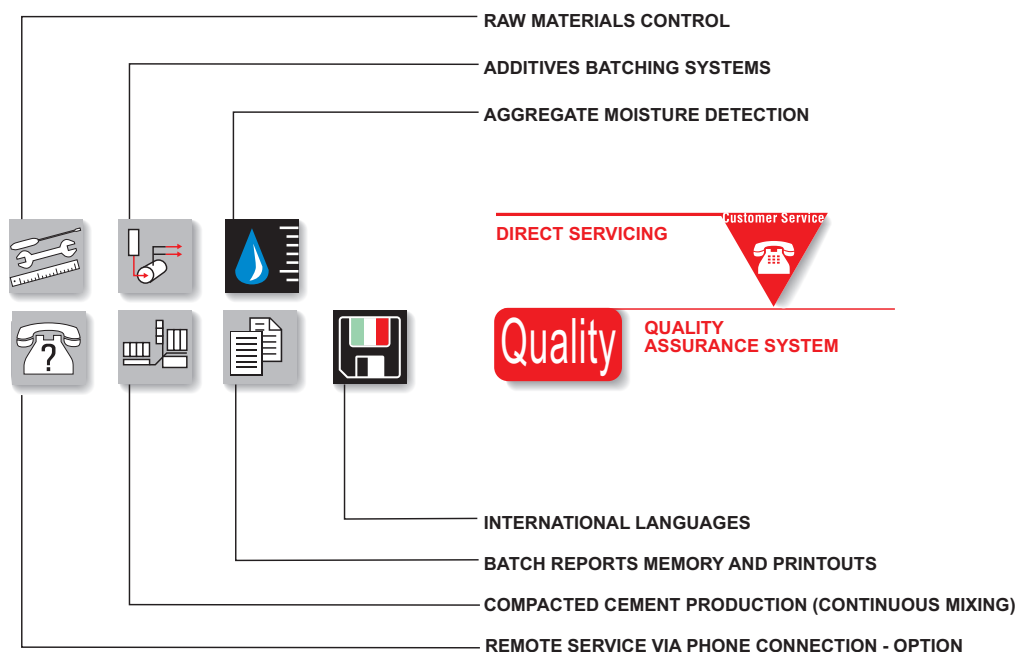
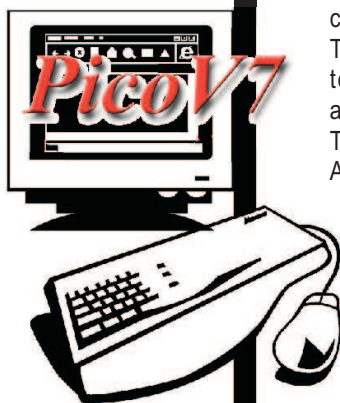
Extremely compact, it is based on STANDARD technologies that are easy to service and operate, and it features a complete automation system with powerful and comprehensive characteristics.

The wide graphic LCD DISPLAY make it easy to input all the parameters through the touch screen keyboard and ensure the readout of weights during both automatic and manual operation.

The version for **truckmixer loading** can control: 4 volume-batched AGGREGATES with flow control through inverters, 1 volume-batched CEMENTS with flow control through inverter, 1 volume-batched WATER with flow control through proportional valve.

An RS232 serial port can be used for standard 40-column printers in order to print mix reports or service printouts.

The construction features of the TOUCH SCREEN (IP65, PANEL mounting) allows installation in dusty environments such as concrete batching plants.



TECHNICAL FEATURES

TERMINAL:

Touch screen display 5,7" STN monochrome LCD.

Quick function access KEYS.

USB port for flash memory (batch reports storage)

PLC connection RS232 serial port.

Printer connection RS232 serial port.

Power supply: 24 Vdc +/- 10 % 15 VA.

Operation temperature: 0-50 °C.

Protection: front IP65, back IP20.

Weight: approximately 0,7 Kg.

PLC OMRON:

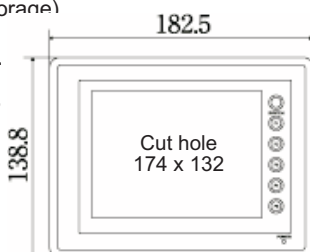
CPU module type CQM1-CPU51-E, 16 inputs 24 Vdc

Power supply module type CQM1-PA203

4 analogue inputs module type CQM1-AD042

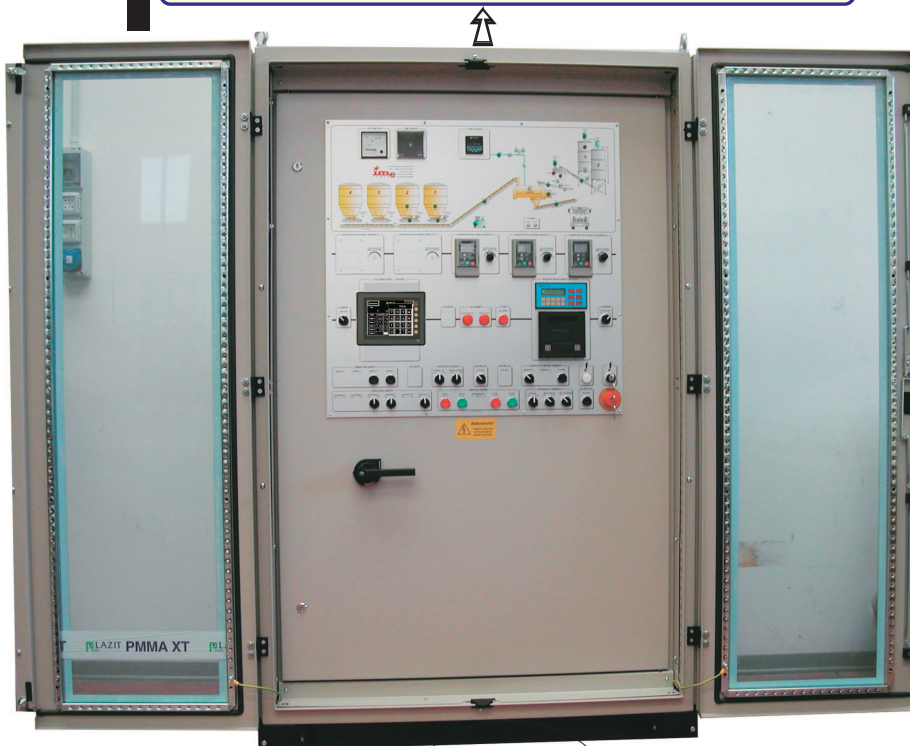
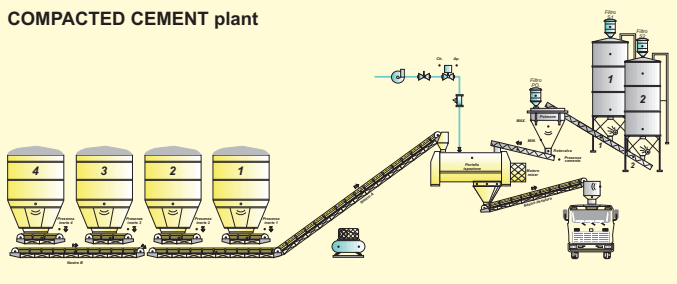
16 relay outputs modules type CQM1-OC222

Serial communication cable for connection to the terminal (10 mt)



AUTOMATED PLANTS EXAMPLE

COMPACTED CEMENT plant



SYSTEM'S FEATURES

- It stores 200 RECIPES set in net weight for each component, on the CUBIC METER basis. The dosage of all components is regulated on quantity/time PID.
- Batching of 4 AGGREGATES by volume with flow control through inverter.
- Batching of 4 CEMENTS by volume with flow control through inverter.
- Batching of 1 WATER by volume (pulse launcher) with flow through proportional valve.
- Control of 1 MIXER with timers and alarms.
- ALARM display and signalling during automatic production.
- All CONFIGURATION PARAMETERS of the plant can be input and trimmed to fit the physical characteristic of the plant in order to achieve the best production rate/accuracy. Free fall control, scales tare, self-tare, emptying times, vibration/fluidification, dosage slow-down, mixing time, cycle suspension and restart.
- COMPONENTS DISCHARGE SEQUENCE can be programmed to trim the proper timing, for best mixing results.
- OUTPUT capacity can be trimmed from 1% to 100%.
- Real time CONTROL of all production phases for production output and raw material consumption optimization.
- BATCH REPORTS storage on removable USB flash memory (5 years of production on average) in order to display, print, export them at any time.
- Automatic printing of BATCH REPORTS at the end of each production cycle and/or at the end of the truckmixer load.
- RAW MATERIAL CONSUMPTION counter, can be displayed and printed at any time.
- All configuration data can be printed for reference and service.
- ANALOGUE INPUTS (scales) CALIBRATION from touch screen.
- PASSWORD protection for access to main functions only from authorized operators.
- The system can be extensively CUSTOMIZED to match different types of batching plants (modifications are separately evaluated and quoted).

CONTROL PANEL for manual and automatic operation

