

# Genyx PF

## System for the production of precast concrete

### INTRODUCTION TO THE SYSTEM



Studied specifically to automatize and manage plants for the production of PRECAST CONCRETE, the GENYX/PF system is developed on PC-PLC commercial hardware, easy to find and service. The powerful and completed software that supervises and controls the plant is WINDOWS native, to make it compatible and installable with the most widespread operating system on the market.

The system allows AUTOMATIC, SEMI-AUTOMATIC and MANUAL management of the entire concrete production cycle, starting from work assignments. In fact, on the list of assignments you simply need to input the data for each manufactured item or group of items you want to produce, indicating the track or bed to be served. You can then choose to produce the entire required mix in a continuous cycle or subdivided into several cycles that are alternated with interlocks to other work stations, indicating the priority with which the assigned track must be served.

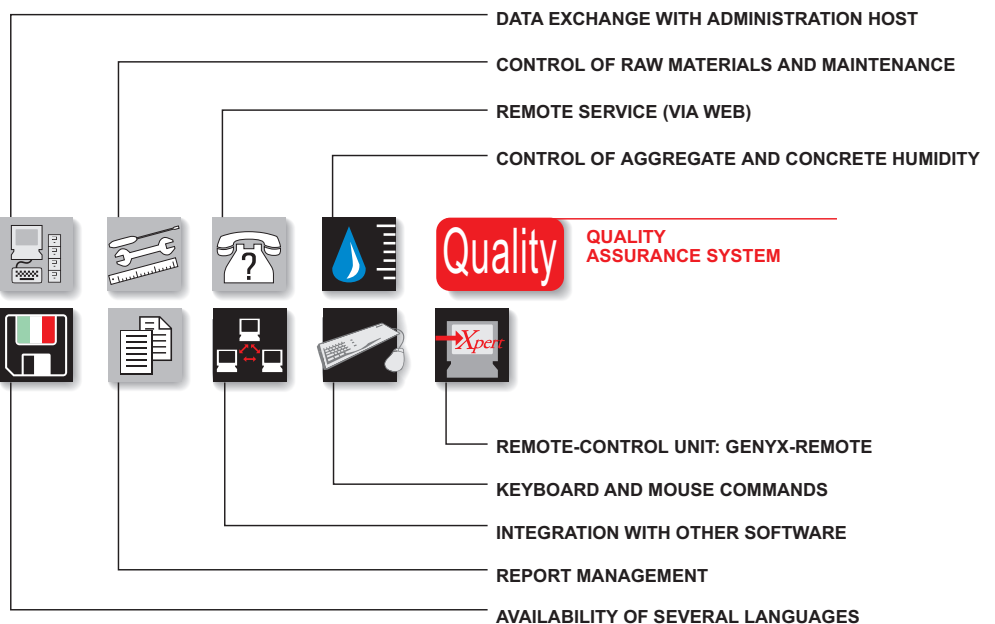
According to the cubic meters required and the formula that is used, the system will calculate net quantity required for each raw material, overseeing its batching and discharge following customized sequences. It also compensates and optimizes any batching errors thanks to a complex self-correction algorithm.

GENYX/PF offers to the user a full range of performance features that make it far more than a simple automation: it is a complete PLANT MANAGEMENT SYSTEM. Some of these features include: management of PRECAST PRODUCTS, MIX REPORT files and management, management of incoming and outgoing RAW MATERIALS, planned MAINTENANCE, filing and browsing of PRODUCTION DATA even after many years, DATA INTERFACE towards accountancy softwares through networks and modems.

GENYX/PF allows a graphically customized supervision for each specific type of concrete batching plant: HORIZONTAL types, TOWERS, DRAG LINES, plants with ONE, TWO or THREE MIXERS.

Comprehensive configuration parameters also allow the system to be installed easily for EXISTING plants that normally have mechanical characteristics that make them more difficult to control.

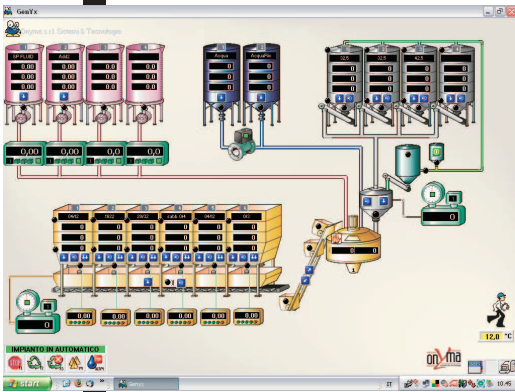
On request, the system can be integrated with a complete hygrometric control program called HYGROTECH. Special probes mounted into the mixer allow detection and correction of manufacturing parameters in order to keep constant the consistency and moisture content of the concrete.



DIRECT SERVICING

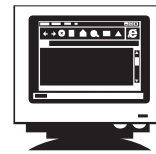
Customer Service

## SYSTEM PERFORMANCE



▲ EXAMPLE OF DISPLAY SCREEN

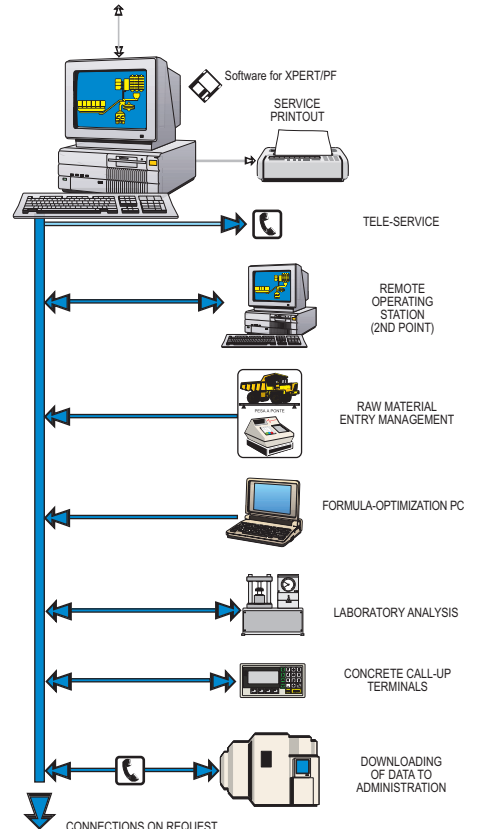
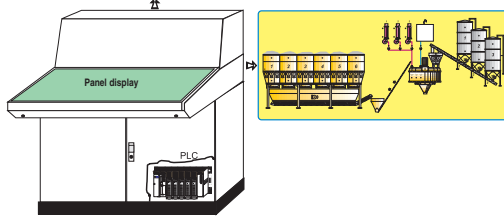
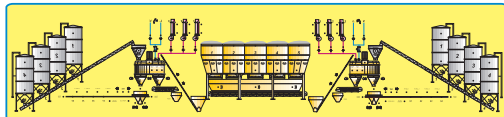
▼ SYSTEM STRUCTURE



- IBM compatible PERSONAL COMPUTER Celeron2,4GHz
- 1 Hard Drive with 40 Gb
- 1 Drive for 3"1/2 diskettes (1.44 Mb)
- 2 RS232 serial port
- 4 USB port, Ethernet, CD Rom
- 1 CENTRONICS parallel port
- 1 WINDOWS XP operating system
- 1 CRT 17" color monitor
- 1 serial module (485) for PC/PLC communications
- 1 PLC with input/output cards

- DATA FILING on removable magnetic media for backup copies, in order to restore them in case of PC repair or replacement.
- CALIBRATION of SCALES and operating TESTS of the inputs and outputs directly from the PC.
- PROTECTION of the sensitive functions and reserved data via SOFTWARE KEYS. Definition of several key levels for different levels of protection.
- Control of the concrete moisture and consistency through the HYGROTECH software package (optional) to monitor and control mix's water.

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PF



- CONTROL of dosage and discharge valves/motors/etc. from the plant's synoptic (mimic) page, point and click with the MOUSE.
- MENU SYSTEM to give the operator the easiest and clearest approach.
- OPERATION with MULTITASKING technology to allow the operator to carry out several functions simultaneously.
- SUPERVISION of the production PROCESS through an animated display customized for the plant.
- Input and execution of the DAILY PRODUCTION program.
- Setting of the CONFIGURATION PARAMETERS to allow optimum utilization of the plant's mechanical characteristics.
- Aggregate HUMIDITY COMPENSATION in automatic (by probes) or manual (keyboard), with correction of aggregates and water quantities.
- ASSOCIATION OF THE COMPONENTS with their own extractor. If there is a lack of material, the extraction point can be replaced with a different one even during the batching phase.
- LOADING SEQUENCE that can be set for each formula, in order to regulate the entry sequence of the components, mixing times and most suitable discharge times.
- Real-time CONTROL of all the LOADING PHASES to optimize production time and the consumption of raw materials.
- Automatic FRACTIONING of the requests according to the capacities of the plant and the mixer.
- Batching of all components with DOUBLE EXTRACTION SPEED.
- SIMULTANEOUS BATCHING MANAGEMENT from the silos or hoppers containing equal components in order to accelerate extraction.
- DATABASE MANAGEMENT for the files referring to formulas, precast products, consumptions, reports, etc.
- MATERIAL INVENTORY CONTROL in real time, with automatic indication of the minimum stock level. The quantities input through the keyboard will be deducted automatically during both the automatic and manual cycle.
- AUTOMATIC DAILY FILING of all totalizers (automatic consumption by component, manual consumption by component, cubic meters produced per formula, precast items produced, etc.). Other totalizations or statistical controls can be done based on the client's specific request.
- FILING of the MIXES (reports) on magnetic media, for browsing, printing or transfer via disk/network to host computer.
- Management of the MAINTENANCE FORMS of the plant parts (by cubic meters produced/time/cycles).
- RECORDING of MANUAL BATCHING done manually directly from the control panel.
- Management of ALARM HISTORY for browsing and printing by time or by type.