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 the 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.
SYSTEM PERFORMANCE

- 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.

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.