proBETON SQL

New Generation Concrete Plant Automation System

Concrete Plant Automation System

An automation system with total control of timing and weight parameters is required for the running of concrete plant at maximum efficiency.
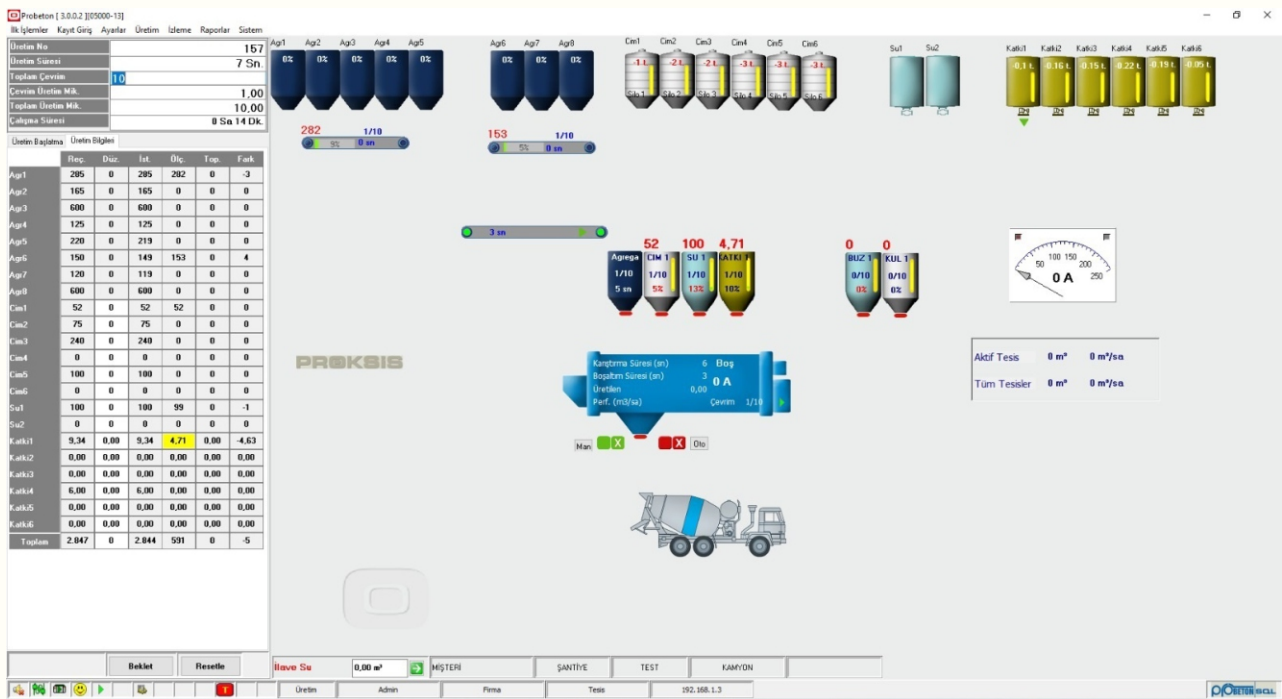
Apart from fulfilling these requirements, automation system should be remotely monitorable and controllable, and realise information exchange with accounting and source planning software.

The new version automation system Probeton SQL meets all these needs; moreover, it bears an extendable structure to which software modules can be attached in order to enhance company performance and customer satisfaction.

25 years of experience in automation of concrete plants has come to life in this software. It possesses every single feature users may expect. It can update itself at any moment via internet. The software is already available for future requirement. It can transfer production information to internet, and it automatically sends SMS and e-mails.

There is no more necessity to establish connection with each plant in order to attain information about them. The compiled information is ready for you at any moment via internet, mobile and tablet PC.

What s New?

MS SQL database

MONITORING

Reporting, authorization, parameters changes can be made from any computer which is connected to local or wide area network, without affecting the operations in production computer. Production screen can be watched online.

Waybill editing, splitting and merging

Rapid manual operation on screen

WEB MONITORING

When entering the web site from PC, mobile phone, iPad or android tablets, production and orders can be displayed in report format. Vendors and customer can reach that "how much delivered, status of order" information without by phone or asking. They can learn them from internet instantly.

Changing amounts of materials on order or production without changing recipe records

QUALITY CONTROL

Laboratory sample data for productions; concrete temperature, consistency, air temperature, the resistance value can be entered by days. The reports of these data can be taken.

Easy waybill design on scanned picture

Starting production by checking the accuracy of the recipe

Changing amount during production

SMS & E-MAIL

When the production is completed and truckmixer departs from the worksite, an information message is sent to worksite authority. When starting of ordering, starting of production or completed of order, this function can be used when and to whom it is desired. The information sent via SMS, can be sent via E-mail.

Use of binder material coefficient in recipe

Using the icon-based menu with the mouse

INTEGRATION

Current, waybill, raw materials, recipe, order and current risk control information can be integrated with much ERP/ accounting software. Moreover, all these properties can be obtained must be taken not only of what is needed.

Zeroise and calibration for compatible weight indicators from the computer

VEHICLE MODULE

Truckmixers round-trip can be followed. If vehicle could not return in specified period, program gives a warning message. Arrival time to the site, starting and ending times of the delivery can be entered to the computer. If return time of vehicle is not entered, related truckmixer cannot be selected for production.

Excel and PDF exports, flexible waybill - printer usage

Intelligent silo routing preventing incorrect material intake

- Computer supported electronic control system gives an opportunity for preparation of concrete in such a way that full automatic or manually if it is needed.

- System can be controlled in 4 different ways: Full automatic control with PC, full automatic control with operator panel, manual control from PC (using mouse), manual control from the control panel (using buttons)

- Manually weighing which is made on PC or panel, is saved with date, time and user information. When the automatically production is cancelled on any stage, so far the scaling amounts are added to the manual amounts. When the manual recipes are printed, the amounts of recipe are recorded by deducted from manual weighings.

- Computer program which can be installed with setup files easily has multilingual support and user-friendly interface that everyone can use. Illustrated and downloadable PDF user manual makes learning process short and easy.

- Basic errors which occur probably in system can be monitored to PC instantly, they are saved by the time of occurrence and they can be deleted after the problem is resolved.

- Confirms and alerts are notified by voice, to users.

- There is a manual/automatic switch which allows activating mixer discharging door, even the plant operates in automatic mode. To prevent overflow and splash, mixer discharging door is opened step by step.

- Considering the moisture, water and aggregate ratio adjusted automatically (If there is a moisture probe). Also there is no probe; moisture can be entered to the program manually.

- Program allows for reporting produced and consumed material, listing records and getting waybills.

- There is no limit to record recipe, customer, site, truckmixer and driver.

- In case of deficient material flow, vibration performed to aggregates, air shocked performed to cements.

- In one period aggregate weighing, opening and closing time of valves are shorter. System makes these movements faster. That allows for sensitive measuring.

- Measuring, mixing and discharge parameters can be entered one by one for every recipe. That allows producing concrete which has specific parameters.

- In power failure situation, production is paused automatically. When the power is on, system gives opportunity to resume the production.

- Authorizations relating to reading, record, deletion, changing operations can be defined one by one for different users. All of these events are recorded by the program.

- After discharging, system washes the additive bunker by spraying water (optional).

- With remote support, operations like troubleshooting, installing program, including waybill-report updates, can be done with using internet.

- There are multi aggregates, cements, waters and additives on the system, as well as the system features multi-material support such as ash, paint and ice.

- The system uses Microsoft SQL database. Microsoft SQL, secure data storage, backup, easy access with the advantages of integration and flexible reporting, preferred by much software. More plants can use a common database server.

- The records appear to be unused and unwanted in the list can be deactivated by using archiving function. So the complex process of making lists and the user chooses the wrong registration problems are eliminated. Records required to be taken from the archive can be activated again.

- Order lists and reports can easily be transferred to hard disk, external memory or anywhere on the network in several formats, including Excel.

- After starting of production, amounts of production can be changed. It is possible to command "production end" during the active cycle.

- Before starting of production or during the production, amounts of materials on order records can be changed. These changes can be made within the limits set by the authorized person.

- When the production or return the product needs to be shipped to different places, the necessary correction on the waybill, split or merge operations can be performed.

- At the end of the production or the beginning of production, different forms of recipes can be printed by two different printers. In addition, the waybill number can be changed on the waybill confirmation screen that is displayed as an option.

- With easy waybill design feature, waybill is placed in the background of the design screen with scanner so it can be edited with the mouse according to the background. Similarly, it is possible to design the report by choosing area and removing area with mouse.

- Available as standard shipping, sales, inventory, wasted material and manual weighing as well as reports "produced / sold / damaged / repeated" sale information is created that contains the end of day summary. This summary with optional modules can be sent to authority of company as SMS and E-mail.

- Required pictures can be used as a background on the production screen. Again, company name or logo can be replaced on the production screen by the users.

- With logout feature, locking program and user switching operations can be performed without exiting program.

- The screens used often can be accessed by clicking the relevant icons in the production screen. In addition, moisture, time and weight parameters of raw materials can be easily reached with the mouse.

- If there is a defective sensor, the sensor can be disabled for not stopping production, sensor can be activated again removal of the problem.

- After the weighing, tolerance control is made for each material. The users can resume production or provide to complete missing amount automatically. Also flow control is made for all materials. If insufficient flow is detected the user is warned, that weighing can be skipped by using "weighing skip" option. These are optional features.

- Cubic meters and weighing the values of each cycle can be displayed in the table, saved and sent to the printer if desired.

- Users can message each other between programs. These messages are recorded in computer.

OPTIONAL MODULES

MONITORING MODULE: Reporting, authorization, parameters changes can be made from any computer which is connected to local network, without affecting the operations in production computer. Production screen can be watched online.

SMS AND E-MAIL MODULE: One of the advantages of the new version is information feature with SMS (short message). When the production is completed and truckmixer departs from the worksite, an information message is sent to worksite authority. When starting of ordering, starting of production or completed of order, this function can be used when and to whom it is desired. The information sent via SMS, can be sent via E-mail. Important warnings and faults can be sent to the authorized personnel via SMS and E-mail too. When changes are made to recipes or production is deleted, the person concerned is informed immediately.

WEB MONITORING MODULE: When entering the web site from PC, mobile phone, iPad or android tablets, production and orders can be displayed in report format. Vendors and customer can reach that "how much delivered, status of order" information without by phone or asking. They can learn them from internet instantly.

ACCOUNTING SOFTWARE INTEGRATION: Current, waybill, raw materials, recipe, order and current risk control information can be integrated with much ERP/ accounting software. Moreover, all these properties can be obtained must be taken not only of what is needed.

QUALITY CONTROL MODULE: Laboratory sample data for productions; concrete temperature, consistency, air temperature, the resistance value can be entered by days. The reports of these data can be taken.

VEHICLE MANAGEMENT: Truckmixers round-trip can be followed. If vehicle could not return in specified period, program gives a warning message. Arrival time to the site, starting and ending times of the delivery can be entered to the computer. If return time of vehicle is not entered, related truckmixer cannot be selected for production. Stock entries can be transferred to production and account software via Truck Module.

Hardware Components

SCHNEIDER M221 PLC

A modular, fast and economic PLC with Ethernet communication infrastructure.

BEIJER 7" OPERATOR PANEL (HMI)

Operator panel with 7" full-colour touchscreen and related software. It ensures full automatic production in case of computer failure.

E-TARTI DIGITAL WEIGHING INDICATORS

Thanks to Modbus communication features, the scale transfers weight values accurately and rapidly to computer system. It is easy to calibrate and zeroise -also by computer, HMI- and provides operator with visual ease.

MIXER CURRENT CONTROL

Analog signal transducer and current transformer. Mixer current is displayed on the screen, consistency and mixer charge is checked.

DESKTOP MINI CONTROL PANEL

A compact and technological control panel small enough to place on desk, near the computer; it ensures manual usage feature for operator, possesses changeable and addable standard buttons and lamps, as well as scale indicators.

POWER PANEL

Electrostatic powder coated panels with IP54 protection have a plate thickness of 2 mm, as well as electro galvanised mounting plate. Materials of Schneider or Siemens brand are used.

Advantages

Modernization of former concrete plant automations, installation of new concrete plant automations and service procedures are carried out fast and safely thanks to usage of some or all of above mentioned components by expert and experienced Proksis technical team and its vendor network in Türkiye and abroad.