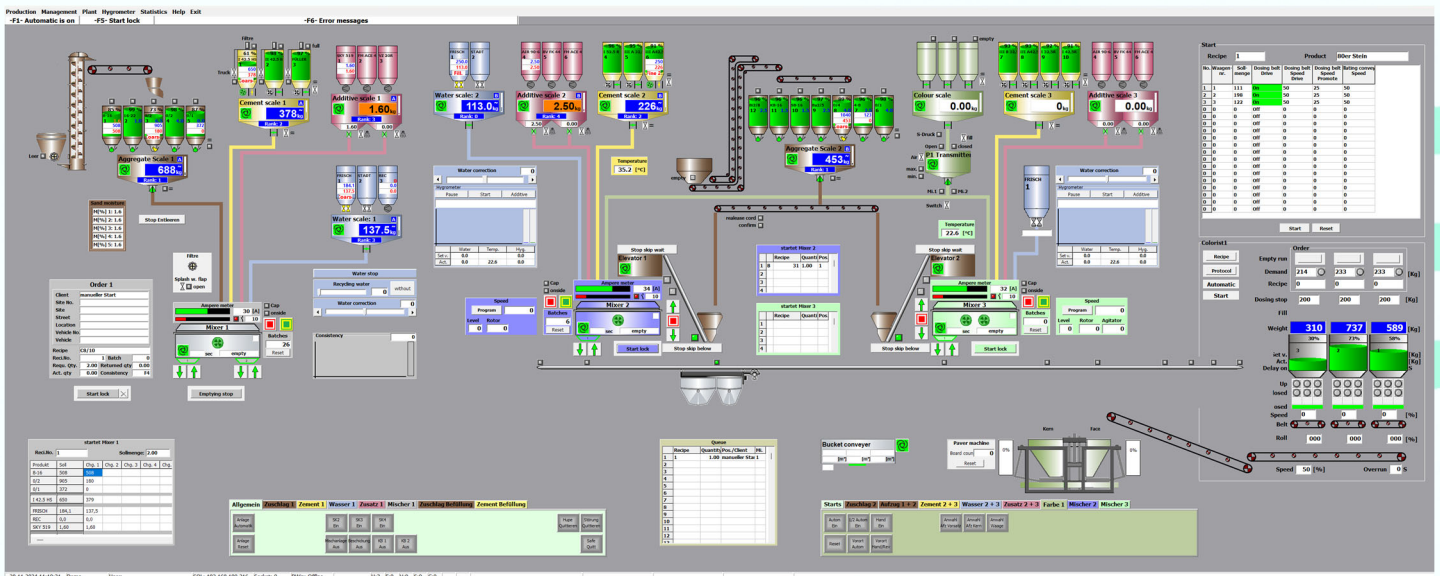




BWD

Process Control System for Concrete Plants

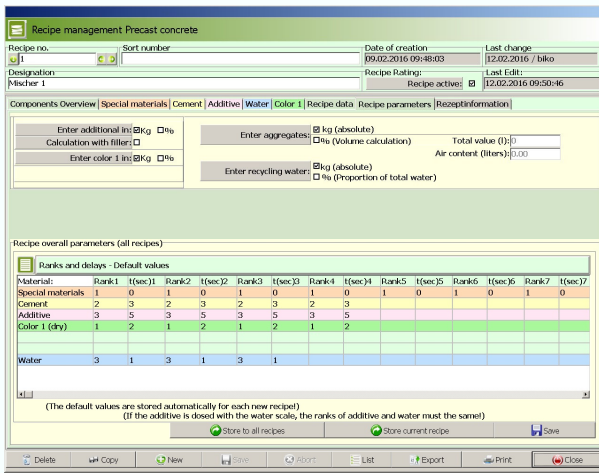


The BWD process control system allows the manual and automatic control of the processes in the concrete mixing plant. Thanks to its modular structure a tailor-made plant control can be created. For this, only the hardware and software modules necessary for the specific production process will be compiled.

The BWD process control system consists of:

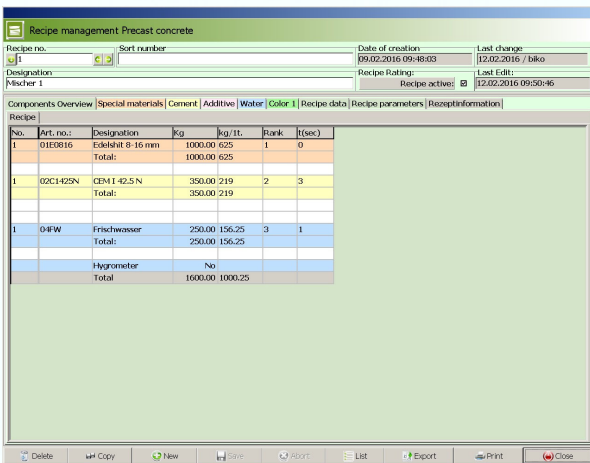
- 1 Siemens industrial-PC
- 1 BWD management and control software
- 1 operating system Windows
- 1 SQL database
- 1 Siemens PLC with Fieldbus technology (Profinet / Profibus)
- 1 software for remote maintenance

Process Control System BWD



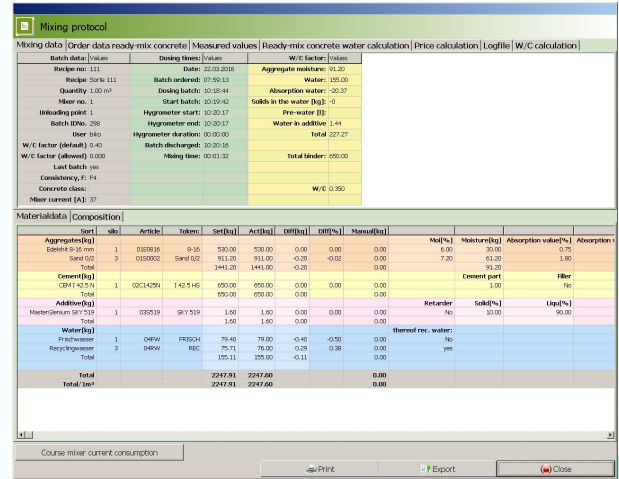
The administration computer BWD manages all master data like recipes, clients, construction sites, materials used, statistics etc.

Clearly laid out menus and self-explaining buttons give the operator a maximum operating comfort and a very good overview. Basic knowledge of the operating system Microsoft Windows is enough to operate BWD rapidly and without problems.



All lists and statistics can be accessed with different sorting orders and output with any time frame. All statistics are displayed tabularly or graphically.

BWD has a data export module which exports all statistics. Thus, the data can be individually checked or edited.



BWD can record unlimited data quantities. Data size does not matter, the speed does not diminish significantly with bigger data sizes. This data can be transferred to a central ERP with a USB stick, modem or through a network.

Backup

- ◆ Automatic backup of all data on a USB stick or server

Database

- ◆ SQL Server
- ◆ Client-Server application
- ◆ Independent backup system

Data export

- ◆ Data export in ASCII or Excel Format for later data preparation with Excel (*.csv)
- ◆

Additional Features

- ◆ Protocol printout with any time frame
- ◆ Recording of all operating functions and system errors for later analysis of the equipment
- ◆ Change languages by pushing one button (if delivered with a foreign language)
- ◆ Interfaces to the invoicing, disposition, ERP, lab (optional)

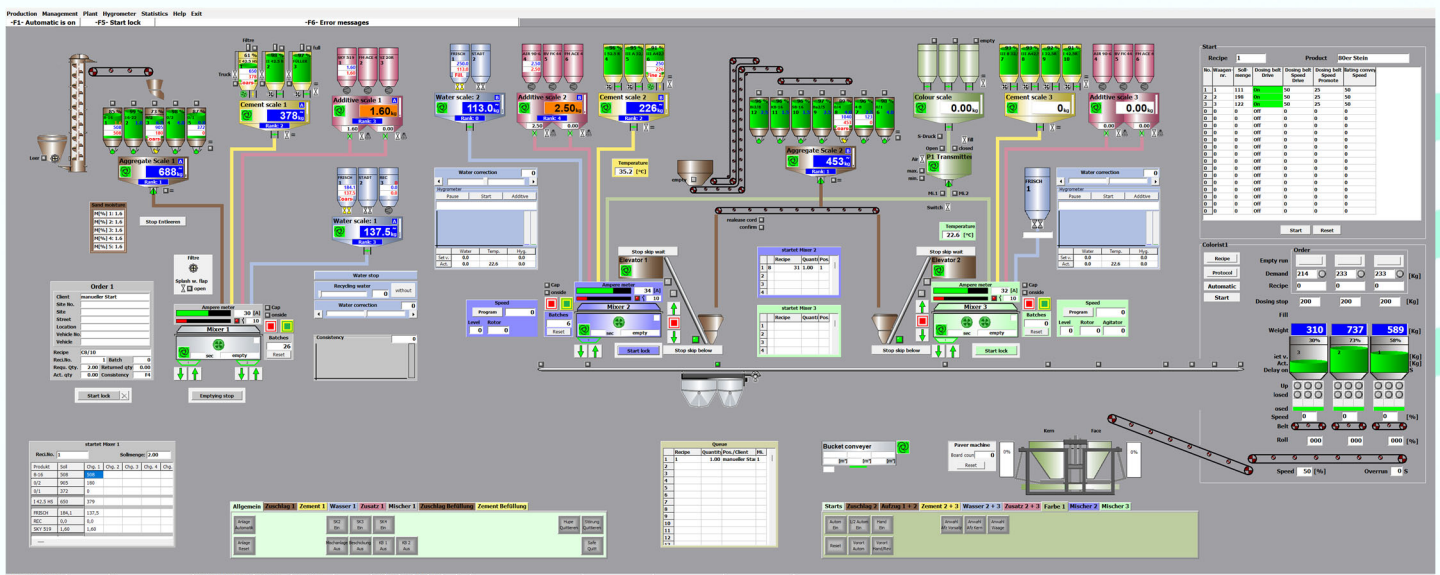
Production

- ◆ Allocation table for articles
- ◆ Colormix
- ◆ Start of production with recipe no., article or place of discharge

Production

The process control software controls the batching procedure in manual and automatic operation. The mixing equipment is displayed schematically. All relevant processes and equipment states as well as exact and clear error messages with time and date are displayed graphically.

- ◆ Recipe controlled production process
 - ◆ Display of all scales on the screen
 - ◆ Operating system Windows
 - ◆ Adjustment of the water correction and the mixing rate fresh / recycling water with the mouse
 - ◆ Display of the processes
 - ◆ Continuous automatic overrun calculation
 - ◆ Water stop function by mouse click
 - ◆ Change of the loading quantity during production
 - ◆ Change of silo during batching
 - ◆ Double filling lock for mixer
 - ◆ Individually adjustable control times
 - ◆ Easy operation of the plant
 - ◆ Output of the error messages
 - ◆ Operating hours meters for all drives
 - ◆ Maintenance module
- Every motor, valve and every limit switch can be monitored. If a beforehand defined condition is fulfilled, a plain text will appear which will also be saved in a file for later processing.



Statistics

- ◆ All statistics can be output with any time frame
- ◆ Consumption statistics managing the used material, theoretical and actual values with difference equation
- ◆ Recipe statistics
- ◆ Article statistics: Listing according to produced articles with consumption of aggregates, cement, additives, colour and water for every article
- ◆ Production statistics with all components included in the recipe with itemization of theoretical and actual values including difference equation
- ◆ Statistics of the mixing protocols for every single batch
- ◆ Daily production
- ◆ LOG File – All processes of the system are recorded and stored in a LOG file

Article Management

- ◆ Selection of several recipe numbers for one article
- ◆ Start parameters

Recipe Management

- ◆ Entering recipes with recipe numbers, designations, components, theoretical values, hygrometer control etc.
- ◆ Daily recipe management

Forms Management

- ◆ Entering forms, also of foreign plants
- ◆ Number of cycles statistics for each form
- ◆ Form repair management
- ◆ Form statistics with article management
- ◆ Connection to the machine

Recovery Set

To restore all Bikotronic software packages and databases easily with the Acronis TrueImage Software. The recovery can be managed by the client without any problems.

Remote Maintenance

Through this connection, all functions of the plant can be tested, accepted or changed.

- ◆ Through network or internet
- ◆ Remote maintenance software TeamViewer
- ◆ Remote maintenance for E/A interface (PLC)

Spare Parts Availability

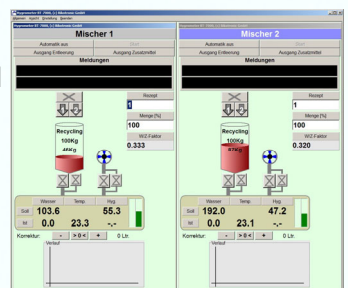
The hardware of the BWD system is based on standard industry computer hardware. Thus a fast and easy spare parts provision is ensured by standardized PC components.

Options

Water Batching Computer BT-7000

Nowadays, the concrete quality is of vital importance for the industrial production process. In order to meet the increasing quality demands, it is essential to control and regulate the moisture content.

The Water Batching Computer BT-7000 determines the moisture of the concrete in the mixer fast and exactly. It calculates and doses the water to be added and is thus the basis for a constantly optimal concrete quality.



Sand Moisture Measurement BTS-WIN

The BTS-WIN measures the moisture continuously while the batching is running. Afterwards the sand / water correction will be executed during the batching. The moisture value is displayed in the corresponding silo.

