PR 1740
Recipe management and reporting system

PROFILE

The recipe management and reporting system PR1740 represents a central user interface for batching applications with the weighing and batching controller PR1713 / PR1730. PR1740 enables the operator both to manage recipe and material data and to supervise complex batching applications.

Up to 16 production lines with up to 16 weighing points can be handled simultaneously. In conjunction with PR1713 / PR1730 and load cells, highest precision and reliability is guaranteed.

The automatic adaptation of batching parameters to changes of material quality, the automatic calculation of the optimal batch size and the optional automatic start from the daily production plan guarantees an intelligent and comfortable process control. This optimizes the use of the production resources.

Due to the clear documentation of running processes and comprehensive reporting of all production data, the system PR1740 allows comfortable control and supervision of batching processes. This is especially supported by the graphic Windows user interface with menu technique.

The option „DDE-Interface“, makes possible a data exchange with other Windows applications like e.g. Excel or the process visualization InTouch. Customized solutions with other programs can be created around PR1740.

PR1740 can be used on any PC with Pentium CPU and 64 megabytes RAM under Windows NT/2000.

PR1740 can communicate via ethernet or serial line with up to 16 batching controllers PR1713 / PR1730.
FUNCTIONS

Production control and monitoring

In the main window, the system shows the actual data of all production lines. For each production line the following data are displayed: Weighing point, order identification, recipe identification, active component with setpoint and actual value, setpoint of the batch and the status of the production line. Active alarm messages are displayed in red alarm window. So they can be detected at a distance.

Further information is displayed only, if the user is authorized to use these functions.

The PR1740 system provides functions like setting up all production parameters including editing of tables, start of production, production monitoring and reporting. The recipes are executed in the batching controllers, which initiate the operation of all valves, actuators and sensors.

System configuration

When first going into operation or when making extensions, the system, including the definition of the production lines, has to be configured.

Furthermore, plant specific parameters like the full scale range, the filling limit and the maximum residue can be defined and entered.

In the maximum system configuration, PR1740 controls 16 PR1713/PR1730 batching controllers with up to 16 weighing points in different combinations and relations to production lines.
OPERATION

Operator guidance via Windows

The PR1740 system uses the Windows package to support the interactive operator interface by well-known techniques. The operation is very easy and requires only basic knowledge. The operator uses the standard keyboard of the PC or a mouse to enter commands or data in the clearly arranged Windows masks. All entered data are checked for plausibility, so that faulty data entries are avoided.

From the main menu, all other windows for process control and monitoring, recipe management and reporting can be called-up. Refer to diagram „Menu structure of PR1740“.

Frequently used functions can be accessed directly by symbol buttons.

After clicking on the required function, the corresponding window e.g. materials, is displayed on the screen.

Typical Windows functions are pull-down menus, data masks and buttons to show the operator the available facilities for data and command entries.

The HELP system

All functions of the PR1740 are supported by an online help system, which gives the operator helpful information for the corresponding function.

If the operator needs, for example, additional information during component editing, he can push the F1-key (the standard HELP-key in Windows programs) and all the information concerning the editing of component is automatically displayed.

The switch over between the HELP menu and the component editing menu is easy and both windows can be displayed side by side.

Menustructure of PR 1740

- Production
  - Single start of production
  - Start Productionplan
  - Production-manager
  - Alarm
  - Message
- Report
  - Production/Batch
  - Alarm
  - Message
- Plan
- Recipe
- Component
- User
  - Login
  - Set password
  - Logout
- System
  - User
  - Configuration
  - Batching-Device
  - Program name
  - Directory
- Backup
- Compact Database
- Reset Productionline
- Window setting
- Reset
- Resize on
- Resize off
- Edit text
- Help
  - Contents
  - Info
Production start
There are different options to start a production:
- Start of a recipe with one or more batches or a total production quantity.
- Start of one specific order from the production plan.
- Sequential processing of all orders from a started production plan.

Recipe management
The recipes are stored in a database on a PC. Up to 9999 recipes may be stored in one working folder.

Editing of recipes in the corresponding window is made easy by clicking on the displayed components and functions. Next to the recipe identification, each recipe can be given a 20 digit recipe name.

During entry, each recipe will be checked for plausibility. This avoids starting a recipe with, for example, non-existing components.

Reports
After completion of a production recipe, PR1740 stores all production data and generates batch and production reports. The print-out of these reports can either be made automatically after the batch or production is finished, or on request. A batch sequence number specific to each device may also be initiated.

Production manager
If productions are started for a busy device, the orders are stored in the production manager.

Production plan (optional)
Production plans for specific production lines related to shifts, days or customers may be defined.

Alarms and messages
The PR1740 system displays clearly all alarm events in a special alarm window and stores them in an alarm report table. Furthermore, all system events like user logins are stored in a user report table.

Dynamic data exchange (optional)
PR1740 supports dynamic data exchange (DDE) of Microsoft Windows. With DDE process data can be sent to other Windows applications or functions e.g. start production, can be initiated from other Window programs. The database of PR1740 is on line accessible for other Windows programs.

Therefore, PR1740 is easy to use together with other Windows applications (e.g. process graphic, database programs).

User access
PR1740 allows the user to define a specific authorization for access to different operating levels for each operator. The following operating levels can be released or blocked:
- Production
- Change of production
- Recipe editing
- System functions
- Reports
- Production data back-up.

TECHNICAL DATA PR1740
- Max. 16 PR1713/PR1730 batching controllers (with serial or ethernet interface)
- Max. 9999 recipes per directory
- 9999 components
- DDE with other Windows applications supported
- Running with Windows NT 4.0/2000
- Database MS ACCESS
- Dynamic data exchange with other windows applications possible (DDE)
- Reports are generated by Crystal Reports from Seagate
- Pentium PC from 266 MHz upwards
- Min. 64 MB RAM
- Hard disk capacity min. 1 GB
- Parallel interface for printer (LPT1) or network printer
- Serial or ethernet interfaces for communication to the batching controllers
- SVGA-Monitor (1024x768 recommended)
- Microsoft Windows NT/2000

ORDER NUMBERS
<table>
<thead>
<tr>
<th>ORDER NUMBERS</th>
<th>Description</th>
<th>Codes</th>
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<tbody>
<tr>
<td>PR1740/00</td>
<td>Recipe- and Production management</td>
<td>9405 317 40001</td>
</tr>
<tr>
<td>PR1740/10</td>
<td>Option for Production plan,Stock control and Consumption report (PR1730)</td>
<td>9405 317 40101</td>
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<tr>
<td>PR1740/20</td>
<td>Option for DDE (needed for each device PR1730)</td>
<td>9405 317 40201</td>
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<tr>
<td>PR1740/30</td>
<td>Option to control PR1740 by PR1730 (needed for each device PR1730)</td>
<td>9405 317 40301</td>
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<tr>
<td>PR1740/40</td>
<td>Recipe- and Production management (needed for each device PR1713)</td>
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<td>PR1740/11</td>
<td>Option for Production plan,Stock control and Consumption report (PR1713)</td>
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<td>PR1740/31</td>
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<td>PR1740/41</td>
<td>Option to control PR1740 by PR1713 (needed for each device PR1713)</td>
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