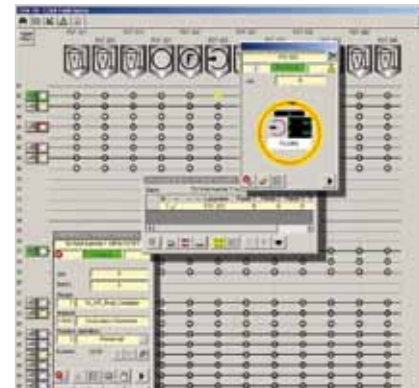
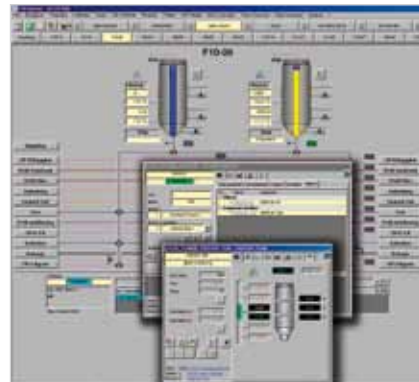


## Brewery-specific technology



### User-friendly equipment modules

- Encapsulate technical functions of the most diverse technical brewing installations
- Semi-automatic control of complex sequences (e. g. complete breaking-up process in the straining vat)
- Acceptance of technological parameters from the higher-level recipe control or direct connection of parameters to the equipment

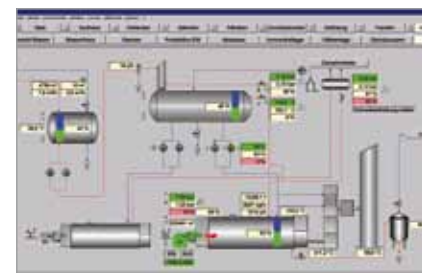
### Selector for fully-automatic fermentation and storage cellar assignment

- User-independent cellar assignment according to freely definable processes
- A special logic checks the requirements for filling orders and suggests tank positions according to the relevant product
- Automatic request for the cleaning of tanks and pipes
- Notification of blocked lines

### Tank storage administration which provides a comprehensive overview

- Tank storage wizard for complex tank storage with parameterization of permitted routing combinations and interlocks
- The tank storage overview shows all the important parameters for a complete tank store, a group of tanks or a single tank

## Technologically superior



### Integrated energy management

- Automatic data acquisition (counters) from the controllers, alternatively offline via PDA scanners
- Recording of primary energy (electricity, gas, oil, water) as well as consumption of steam for heating, hot water, coolants, etc.
- Peak load analysis (measurement records and consumption reports)
- Gentle load management of the product through the targeted switching off of consumers and a coordinated switching on again

### Auxiliary processes

- Integration of package units (air pressure plants, coolants, water preparation, etc.) in *brewmaxx*
- Inclusion of the entire auxiliary processes into the peak shaving
- Production-related reports on secondary energy consumption

### Filling & packaging

- Data acquisition in accordance with the Weihenstephan standards
- Batch-, shift- and order-related administration and archiving
- Analysis of weak points, diagnosis of plant downtimes (relevant to filler)
- Performance analyses (e. g. of the OEE)
- Line-related order control
- Interfacing to higher-level ERP systems (e. g. SAP) for order-based dispatch and materials management

## Ideal for extension or modernization

New functionalities, such as energy and materials management, or extensions of functions due to new product varieties are only possible with a modern process control system like *brewmaxx*.

However, the goal of each refurbishment should always be to eliminate isolated solutions and to ensure a universal standard automation structure.

### Migration or replacement?

In a refurbishment project, you must always ask the same fundamental question:

Can hardware, especially process peripherals, be retained and software migrated, or must the existing line and control equipment be completely replaced?

The decision depends on the existing technical automation infrastructure. Existing but obsolete control systems with structured software configuration can be migrated to *brewmaxx* very well, whereby procedures, chains and interlocks are simply implemented using a conversion tool.

In so far as no technological changes are required, the parameterization can also largely be retained. Only process images must be newly created and technological objects with additional functionality parameterized again.



Existing control technology can be migrated to *brewmaxx* economically.

### All at once or step by step?

Here also the answer depends on the surrounding conditions:

- Is it a matter of guaranteeing readiness for production or is an extension with additional functionality desired?
- Should we consider a combination of *brewmaxx* with existing automation systems which are to be retained?
- Can production be stored, the plant be shut down for a longer period of time or
- must changes and extensions be carried out without shutting down the controllers or
- must be refurbishment be performed with minimum downtimes whilst maintaining full production?

ProLeiT has gathered relevant experience in a large number of refurbishment projects.

Our focus lies in solutions which optimize your production – with functions such as energy data acquisition with load management and process-oriented materials management or the video mode for process diagnosis.

Whether migration or replacement: with *brewmaxx* - the open, scalable system - this is possible in an efficient and economical manner with minimal plant downtimes or during breaks in production.

With *brewmaxx* you also have the certainty of investing in the best technology available today and at the same time being best prepared for any future developments.

*brewmaxx*: the right decision for a smooth and highly efficient brewing operation today, tomorrow and the day after tomorrow.

# brewmaxx

## The industry sector solution for breweries

Process control technology. MES included.

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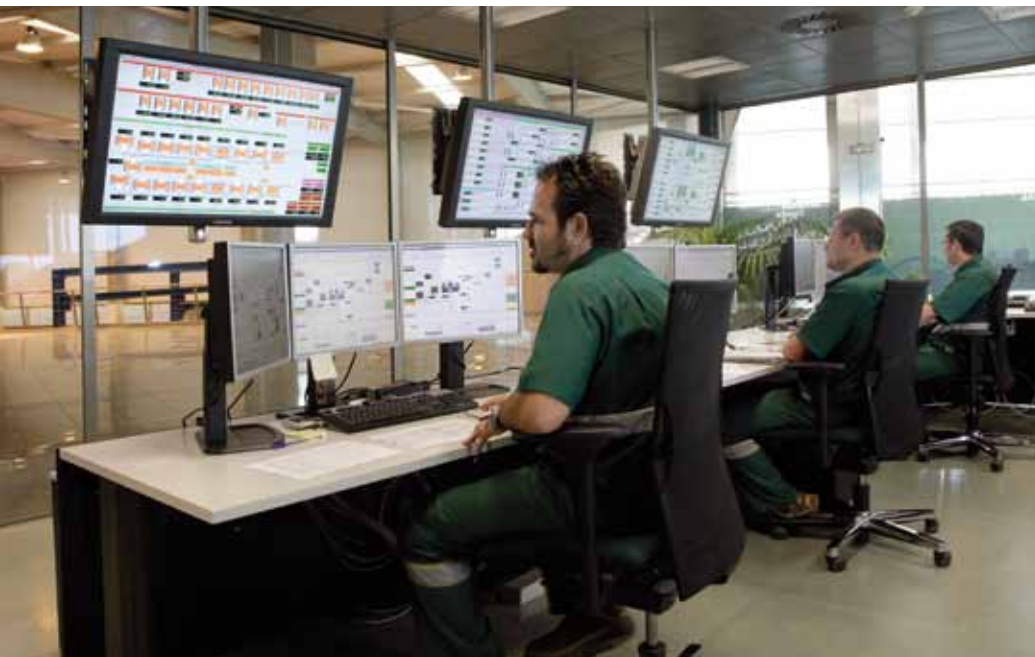
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Issued on September 2009

More than 500  
installations worldwide

## The industry sector solution for breweries



# brewmaxx

*brewmaxx* is the result of intensive cooperation between ProLeiT and GEA Brewery Systems over many years. The control system was specially developed for the brewing industry and unites comprehensive IT experience and brewing know-how.

*brewmaxx* is tailored perfectly for daily operation in breweries like no other process control system and makes innovative, user-oriented solutions possible. No matter whether you are only controlling a process section with *brewmaxx* or several process

steps up to production logistics – you can rely on a sustainable future-oriented solution.

It provides the master brewer and all other users with valuable information on all production and business processes. This foundation is able to support all entrepreneurial decisions, links the various processes intelligently and helps to manage the brewery more efficiently and economically.

### Development based on principles

Unlike pure systems integrators, who generally use standardized control systems, we consistently focus on sector-specific process automation. Through our own system development, our specific brewing know-how and close cooperation with breweries, industrial plant suppliers and universities we are in the position of being able to align each new version of *brewmaxx* even better with the requirements of our customers.

### Far-sighted management with *brewmaxx*

Process automation with *brewmaxx* brings savings in time, costs and labor. Resources are used more efficiently. The entire brewery becomes a flexible operation which can react quickly to changed conditions. And not least *brewmaxx* gives the brewer the certainty of always being able to produce his beer at the customary high standard of quality.

## Why *brewmaxx*?

### 1. Parameterizable process control system – inclusive of MES

The stated goal of the development of *brewmaxx* is that as almost all technical and technological functions can be implemented without individual programming. "Parameterization rather than programming" is the key to efficient engineering. Because of the unique class concept, just one freely parameterizable software module always controls and monitors all similar objects in the plant. Adjustments can be performed safely even during the production process.

### 2. Intensive technology transfer – the most competent player in our industry sector

*brewmaxx* is the essence of over 20 years' experience and expertise in the management of brewing processes. Born from the desire to develop a process control system, which meets the most modern of demands, the specific technical know-how of our systems developers was blended with the techno-

logical expertise of our master brewers. In conjunction with intensive dialog with customers and universities, *brewmaxx* has developed into the preferred system solution worldwide.

### 3. At home in the world's leading control systems

*brewmaxx* is the only brewery-specific, open process control system worldwide with availability on the following PLC platforms:

- Siemens Simatic S7
- Rockwell Automation ControlLogix
- Mitsubishi MELSEC System Q

### 4. Reference solution and standard application for the brewing industry

*brewmaxx* is in use today on every continent of the world and controls breweries with a total annual production of more than 250 million hectoliters – almost a fifth of total global beer production.

## An overview of the *brewmaxx* modules

The great advantage of *brewmaxx* lies in its modular system architecture. The *brewmaxx* software components cover various process steps and form a seamless and universal system – from process control to production data acquisition and process management and on to the comprehensive process steps in production management and the integration of the ERP level.

*brewmaxx* includes all functionalities to universally automate the production process of a brewery through all process steps. The individual modules extend the functionality of the process control system by MES Functions such as order management, graphic recipe handling, materials management and much more. All modules can be upgraded at a later date and thus guarantee long-term investment security.

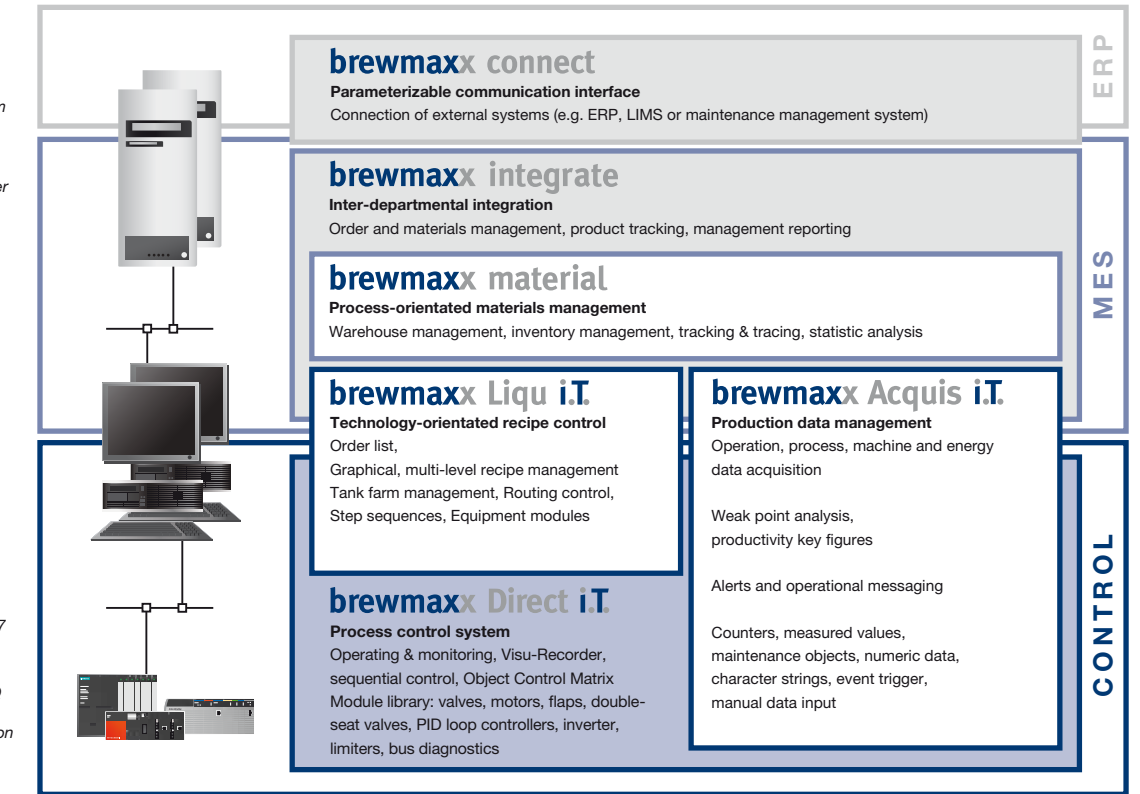
### *brewmaxx Direct iT* – the process control system

As the essential core of the system, *brewmaxx Direct iT* offers a comprehensive spectrum of applications for the specific requirements of breweries. With its class concept (technical and technological automation objects with encapsulated functionality) *brewmaxx Direct iT* makes a secure future basis available for the solution of control and process engineering tasks.

### *brewmaxx Liqu iT* – the recipe system

The *brewmaxx Liqu iT* module was specially developed for the brewing industry and is the system component for sequentially controlled processes in the beverage industry. It complements *brewmaxx Direct iT* with its technology-oriented recipe control, administration and production of basic recipes.

Server	Standard server Hot-standby system Stratus ftServer with: MS Windows Server MS SQL Server
Client	Standard-PCs Industrial-PCs with: Microsoft Windows Microsoft Office
Communications	Ethernet TCP/IP OPC
PLC	Siemens Simatic S7  Mitsubishi MELSEC System Q  Rockwell Automation ControlLogix



### *brewmaxx Acquis iT* – the production data manager

The *brewmaxx Acquis iT* module is a high-performance real-time database in which all operational, process, machine and energy data are captured, processed and prepared. A range of pre-configured production, batch and usage reports are available as a standard option. The reports are generated in Excel and thus can be further processed without a problem.

### *brewmaxx material* – materials management

*brewmaxx Direct iT*, as well as *brewmaxx Acquis iT*, can be combined with these system components and make available therewith important functions for driving production processes related to materials. The exact acquisition of transactions for all

materials movements is based on a flexibly parameterizable storage model which is customized to the requirements of the process. This approach allows detailed inventory management and – in combination with a higher-level order management – a comprehensive functionality for batch tracking.

### *brewmaxx integrate* – area-independent integration

The *brewmaxx integrate* module allows the integration of various production areas, working largely independently on a level close to the process, into a universal and consistent solution. It is the central point for the collection, consolidation and processing of information from the individual production areas as well as from external system relevant for production (e. g. LIMS, maintenance management).

### *brewmaxx connect* – the interfacing tool

The *brewmaxx connect* module offers a freely parameterizable interface for universal data exchange – especially with third-party systems. Various communications channels for the interfacing of ERP, laboratory or maintenance systems are available.

certified by experience