



# brewmaxx

Process Control Systems. MES inside.  
The Plant iT™ industry solution for breweries.



Success Story // Brewing Industry //  
Hansa Borg, Norway

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**ProLeiT**  
by Schneider Electric

# Keeping all energy peaks under control with brewmaxx

Leading the way to a more sustainable future by avoiding load peaks, utilizing load valleys, and optimizing consumption: How ProLeiT upgraded brewmaxx at the Hansa Borg brewery in Bergen, integrated the entire building control system, and installed the EnMS energy management system.

Hansa, Borg, CB Pilsner, and Fredrikstad are well-known beer brands. They are brewed by Hansa Borg Bryggerier AS, a company formed by the merger of two breweries in 1997. Today, Norway's second largest beer producer is owned by the Danish firm Royal Unibrew. The roughly 300 employees helped generate sales of around 1.4 billion Norwegian kroner in 2021.

Long-term partnerships are the cornerstone of the strategy: When it comes to process control systems, Hansa Borg has been working with ProLeiT for over 20 years – the brewmaxx industry solution for automation, information, and control technology is used at the headquarters in Bergen. As the foundation for all entrepreneurial decisions, the PCS links the various processes and helps to manage the brewery more effectively and efficiently.

However, the aging system, including the control cabinets and peripherals, was calling out for modernization, leaving no alternative but to upgrade it. The proposed project not only included upgrading brewmaxx but also replacing all the I/O cards.

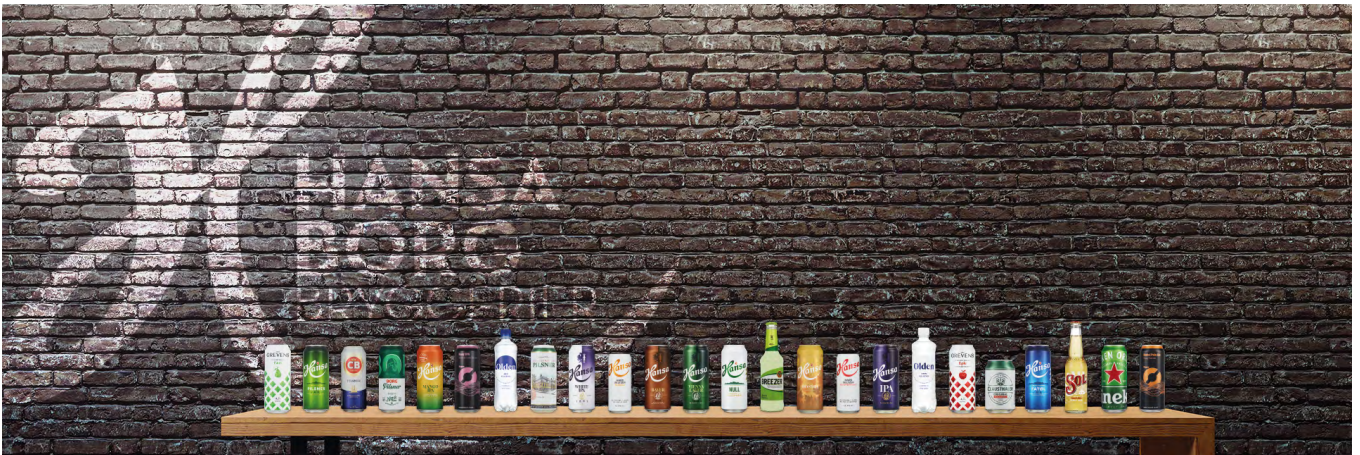


Info

Company:  
Hansa Borg  
Bryggerier  
Sector:  
Brewing Industry  
Location: Bergen  
Country: Norway



View of the factory



Product portfolio Hansa Borg

Since brewmaxx had already been installed as a central instance, integrating the entire building control system with the production processes became a key objective. To achieve this, the brewmaxx system was enhanced with the EnMS module.

#### Central system for a full overview

Delivery delays necessitated gradual connection of individual control cabinets, something that demanded a high level of flexibility from ProLeiT. Despite the gradual integration of all the systems, Hansa Borg soon began to reap significant long-term benefits: All systems and data converge onto a single server and in one database. Having only one version of the truth significantly simplifies data maintenance and reduces errors.

The central recording of all measurements, alarms, and messages ensures easy comparison and optimization options, leading to greater efficiency. Further, the central management of processes and parameterization through a sequence-controlled recipe system enable smooth and efficient production processes.



Hansa Borg Brewhouse

The automated building control system integrated into brewmaxx enables Hansa Borg to manage the brewery with even greater efficiency. All the data now enter the system via the PLC, thereby enabling brewmaxx to control all the ventilation, aeration, heating, and cooling systems. "The decisive added value," says Matthias Schmäzlin, Sales Manager at ProLeiT, "is provided by the energy management system (EnMS) integrated into brewmaxx. It enables Hansa Borg to keep a close eye on water, electricity, and gas consumption." The precise measurement, recording, and analysis of consumption via dashboards integrated into brewmaxx open up enormous savings potential for the future. And this applies to all production systems and the fully integrated building control system.



brewmaxx EnMS

Keyword load peaks: Thanks to the EnMS, Hansa Borg is not only able to react to consumption peaks but also continuously determine, document, and optimize energy consumption at its brewery in Bergen. This capability allows the Hansa Borg operators to react directly to the respective values by controlling and adjusting cooling programs.

A huge advantage that helps save hard cash, especially considering the currently high energy costs and the expected future price hikes for electricity, oil, and gas. And that answers the question for Hansa Borg of how it can continue to output products economically in the future.

Avoiding load peaks, utilizing load valleys

The Norwegian brewery can now effectively save energy and improve all its processes step-by-step without impacting ongoing production and product quality. In fact, the agenda of the Hansa Borg brewery is primarily focused on avoiding costly energy peaks. Experience has shown that significant savings in the double-digit percentage range are possible depending on the actual design and optimization.

The EnMS add-on enables clearly structured reports based on areas, comparisons, or time, thus displaying all the interrelationships for easy analysis. Extensive recording options include metered

values from pulse and absolute value meters, calculated (virtual) meters, summation meters, integral meters, differential meters, and analog values such as the ambient temperature.

Recording data is just the first step, with comprehensive analysis and optimization set to follow. Customer-specific strategies that can be defined in the energy management system also play a crucial role in ensuring efficient and sustainable operation.

For breweries, this means: Setpoint values for temperatures and quantities can be changed directly to meet production needs and unneeded energy consumers can be turned off. The energy-intensive start-up of the milling or filling plant is another typical application: To avoid exceeding a certain level of energy consumption, unnecessary consumers can be turned off here and cooling processes optimized or postponed.

By defining limit values for load peaks and consumers, the Hansa Borg brewery in Bergen is able to pro-actively set its own parameters for intelligent alarming. Load peaks are avoided, and load valleys used in the best way possible. Further, this allows for the continuous recording of all as-is states of primary and secondary energy carriers, as well as other media. Energy monitoring ensures detailed analysis to display data through uniform reporting and variable comparisons over various periods of time.

The ProLeiT Visu-Recorder guarantees the historical availability and visual traceability of all measured values and processes, thus enabling detailed analyses. The playback function is easily started via the brewmaxx process visualization, similar to a media player. The time window of the recording and the playback speed can be freely selected. Since all the process sequences can be clearly traced and analyzed, the Hansa Borg brewery is able to quickly locate and eliminate any errors and faults.

The brewery's operators will also benefit in the future from faster response times when addressing malfunctions and solving problems.

### Equipped for a sustainable future

The process control system underwent a thorough modernization that included both the control cabinets and the I/O cards and has resulted in a cutting-edge plant.



Filling at Hansa Borg

## SUCCESS STORY // BREWING INDUSTRY // HANSA BORG

This makes it not only more efficient but also boosts its safety and reliability. Since the central brewmaxx process control system integrates all the production processes, including the building control system, the decision-makers at Hansa Borg only need to consider updates at a single point. The reduced number of interfaces also helps to minimize any potential security gaps. In any case, it operates within a shielded virtual environment as a fully isolated system.

In summary, the brewery in Bergen profits from state-of-the-art software that meets cutting-edge cybersecurity standards, alongside regular updates for both operating and database systems. In addition, there is a high level of standardization: For the operators, who received on-the-job training during the project, everything has a uniform look and feel. All the user interfaces are intuitive, straightforward, and basically accessible to all.

By means of energy performance optimization and comprehensive process transparency, the Hansa Borg brewery can now achieve significant savings potential. The brewmaxx update, coupled with the energy management system and the integrated building control system, has established a solid foundation for data evaluation and process optimization. Whether it is production planning or direct intervention in production control, we prioritize optimizing the "low hanging fruits" step-by-step before moving on to more complex measures. And perhaps, during the improvement process, the brewery may uncover savings potential that previously went under the radar.

"Besides having the key to significant savings in operating and manufacturing costs, the Hansa Borg brewery now possesses a real competitive advantage," explains Matthias Schmäzlin. Furthermore, Ivar Selheim, Technical Manager at the Hansa Borg brewery, confirms that the enduring personal relationship with ProLeiT is built on mutual respect and cooperation: "You know each other, you trust each other, and you appreciate what you have. Everything is available under one roof and from a single point of contact. And if questions ever arise, we can be sure to get the right answers quickly and effectively." The energy savings potential that the Hansa Borg brewery in Bergen, Norway, will ultimately be able to achieve remains to be seen. But one thing is for sure: The future looks much more efficient and sustainable.



Ivar Selheim,  
Technical Manager at the Hansa Borg brewery  
in Bergen



Matthias Schmäzlin,  
Responsible Sales Manager at ProLeiT



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