



- CUSTOMER SUCCESS STORY -

Gösser Brewery, in Leoben, Austria

“Brew the very best beer you can ...

... Because you are going to drink it.” So the old saying goes. Austria is ranked second place after the Czech Republic in the list of nations which consume the most beer. In Austria 105 liters of beer are drunk per capita each year. With this amount of experience it should be possible to rely on Austrians to know which beer is the best – and that is the market leader “Gösser” beer brewed in Southern Austria.

Relevant for: beer

To ensure excellent quality the brew masters at the Göss Brewery rely on highly accurate measuring technology: Comprehensive quality control by Anton Paar is used in the production process and the laboratory in order to ensure that only beer which meets the highest requirements is bottled.

The Göss Brewery in Göss, near Leoben, looks back on more than 150 years of history. The current market leader in Austria has always been a pioneer in new technologies: This includes the early adoption of a pasteurization process, use of digital density measurement, and the title of being the first CO₂-neutral brewery in the world. In all this, however, the beer is always the main focus. It must be good, taste good, and be a refreshing beverage for all who drink it. But what makes a good beer? How is it made? And who decides what is good?

Andreas Werner

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A master of his art

Andreas Werner knows a lot about beer. He has been the brew master at Göss Brewery, the largest brewery in Austria, for the last 15 years. He has been confronted with all of the parameters which describe beer since he started in his profession some 30 years ago. “In 1985 one of the very first instruments from Anton Paar for determining the original extract was in use at the Central Testing Laboratory for Austrian Breweries. It was as big as a dining table and measured both density and sound velocity,” Mr. Werner remembers. That was seen as a big step in the quality control at breweries. Later inline sensors became established for measurements during production. These were first used at the filter units.



Market leader: Producing around 1 million hectoliters of beer each year, Göss Brewery is the largest brewery in Austria.

With success – digital density measurement quickly became standard in beer production. “Ever since I began work in this branch, and that is over 30 years ago now, Anton Paar has been my constant companion. I didn’t need to get to know Anton Paar, it was just always there,” he explains. Andreas Werner is now also the brew master for the Puntigam, Schladming and Villach breweries, as well as for Göss Brewery. These are all part of the Brau Union Österreich AG concern. All these breweries use Anton Paar instruments.

An excursion into the world of beer quality

For Andreas Werner beer quality comprises two factors: Drinkability (how much you want to take another sip) and consistency. “Good quality is consistent quality. That is when I bottle the beer the customer expects month for month, year for year,” reports Werner. Both depend on parameters such as original extract, alcohol, oxygen (O_2), and carbon dioxide (CO_2).

The values a beer needs to have to make it popular is something the customer decides when purchasing. That a beer has the values which are required is the brew master's job. He always has an eye on “his” beer because in the laboratory and throughout the whole production process the beer is measured and checked constantly. The Göss Brewery uses the modular PBA-B Generation M (Packaged Beverage Analyzer for Beer), two portable CboxQC™ At-line units for combined CO_2 and O_2 measurement at the production line and several Beer Monitors for process measurement of the alcohol content, original extract, and CO_2 . “The most important instrument here is the PBA-B,” explains Werner. “It is the reference instrument for quality control in the lab.” At the Göss Brewery 30 to 50 beer samples are analyzed each day with the PBA-B for the final product evaluation.



All-rounder: The PBA-B modular measuring system measures up to eight parameters from one beer sample.

With this one measuring system it is possible to determine density, alcohol content, extract (original extract), CO_2 , and O_2 . That allows the brewery to save money and time in their routine measurements for final quality control. In addition, the Göss Brewery also uses the portable CboxQC™ At-line CO_2 meter. “We mostly use these portable instruments for check measurements,” explains Werner, “for example in filtering, to verify deviations, and at the tanks, where there is otherwise no measuring point.”

Process monitoring as a strategic decision

Besides these routine checks the focus at Göss Brewery is clearly on monitoring the production. With the Beer Monitor from Anton Paar the beer is analyzed at several points throughout the production process: at the wort pipe, at the beer cooler pipe, at the filters, and before bottling. The reasons why the brewery has adopted this strategy is obvious to Andreas Werner: "If I have the production process under control then this results in quality." Process monitoring is the key.

The benefit: The values which the beer should have are stored in the device. If the value measured by the process sensor deviates from these stored values because, for example, the CO₂ content in the tank before the bottle filler is too high then the brew master can take immediate action. The PBA-B device and the portable CboxQC At-line CO₂ meter are used to undertake control measurements. "If there is a problem we can make a decision on the right course of action based on the figures, data, and facts," explains Werner. This ensures high quality beer before the product is even in the bottle.



Process monitoring: The Beer Monitor from Anton Paar analyzes the beer during production.

Reproducible and reliable

Monitoring the beer via measurements throughout the production process and via routine measurements in the laboratory has proved successful for the Göss Brewery according to Andreas Werner – as has the longstanding partnership with Anton Paar. "The most important things for us are the accuracy and reliability of the device," explains the brew master. "The instruments from Anton Paar are accurate, provide reproducible measuring results, and have a long working life. That gives us peace of mind; we know we don't have to measure a second time. We also profit from being close to the Anton Paar headquarters and benefit from the good service."



Andreas Werner is the 8th Brew master in the history of Göss Brewery.

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Emphasis on sustainability

The longstanding relationship with Anton Paar and the focus on accuracy and quality are also part of the sustainable company philosophy of Göss Brewery. The brewery places great importance on decisions which are made with an eye to the future and which contribute to the long-term success of the company.

The most recent example of this pursuit of sustainability is the renovation work completed in 2015 which made Göss Brewery the first “green” brewery in the world. Raw materials such as hops and grain all come from the region. Due to a 1500 m² solar energy installation, a biogas plant, and the use of waste heat from the brewery and neighboring wood-processing companies, the beer brewed at Göss Brewery is CO₂ neutral. In 2016 this commitment was honored by the EU with the “EU Sustainable Energy Award”.

Main points at a glance

MEASURED PARAMETERS Density, alcohol, original extract, real extract, CO₂, O₂, optional measurement of turbidity, pH value, and color

INSTRUMENTS PBA-B beverage analyzing system, Beer Monitor, portable CboxQC At-line CO₂ meter, portable DMA 35 density meter

SAMPLE THROUGHPUT 30 to 50 samples/day on the PBA-B