

Birrificio Antoniano's new craft-beer production plant

Craft beer and industrial efficiency

To meet the ever-growing demand for its top quality craft beers, the Birrificio Antoniano S.r.l. Company in Padua selected the Tressse Progetti S.r.l. Company and zenon, COPA-DATA's HMI/SCADA software solution, for its new automated brewery.



THE ANTONIANO BREWERY

Birrificio Antoniano was founded in Padua in 2013 as an agricultural brewery. It was a conscious choice to become one with the land that gives the unique flavor to the beer that it produces. The brewery was a „dream come true“ for a team of former beverage distributors who remade themselves into craft beer brewers. With a strong love for the territory and being totally dedicated to the quality of its raw materials and products, the Birrificio Antoniano team chose to use craft brewing methods. Under the direction of the master brewer, who guides each stage of production, their approach maintains respect for the raw materials and the commitment to wait patiently for the natural product to mature.

THE INITIAL SITUATION

Birrificio Antoniano made several types of craft beers in 500-liter batches using very basic, almost manual, production and process controls. This was handled mainly by the master brewer and his staff. Despite the 500-liter batch production capacity and the hand-made process, thanks to the staff's experience Birrificio Antoniano could make several kinds of beer using an especially flexible production process. In this way, the business got its start on the market by brewing beers that satisfy the tastes of a vast number of beer enthusiasts.



The Master Brewer can keep track of the entire production process at a glance on the multiple monitors displaying supervision application information in the control room.

DEMAND

With demand growing on the craft beer market, the management at Birrificio Antoniano realized that the time was right to increase their production capacity by automating their plant. Their goal was for their brewery to increase batch sizes from 500 liters to 2,000 liters. To achieve this, they needed a new production plant with increased capacity and more automation that would, at the same time, keep the same staff employed in the management of the new brands. The essential objectives were to build a plant with machinery able to optimize the yield of their raw materials, ensure consistent production batch after batch, and still be flexible enough to change the beers’ recipes. This meant keeping close control over the temperature and fermentation status of each tank in the brewery. The same system would then closely monitor and supervise not only the production but also the utilities that the entire brewery used, all from one central control station.

THE SOLUTION

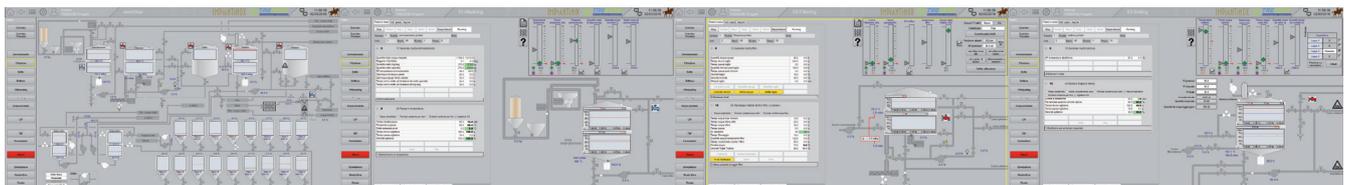
To achieve its objectives, Birrificio Antoniano requested the support of Treesse Progetti S.r.l. Company, which supplies brewing process automation software and systems, based on zenon, COPA-DATA’s HMI/SCADA software. In over thirty years of business, Treesse Progetti has demonstrated that it is a leader in the field of industrial process automation by offering customized products and services of the highest quality. Over the years the company has specialized in the Food & Beverage industry, especially in beer production. Currently, 70% of all the beer production plants in Italy have installed Treesse software. COPA-DATA is a technological leader in the development of industrial automation software solutions. With its zenon Product Family, COPA-DATA can cover every automation stage – from the sensor to the Cloud. Together, Treesse Progetti and COPA-DATA have succeeded in meeting the needs of Birrificio Antoniano.

Their facility has a surface area of 1,850 m² with a current production capacity of 21,000-22,000 hl/year. It can boil four to five 2,000-liter batches each day, five days a week.

Not only has Birrificio Antoniano increased its production, thanks to the solution provided, it has increased its flexibility because of zenon’s powerful recipe management system. The system is platform independent. It can be built on any type of hardware because of zenon’s high capacity for integration with existing plant systems. With its intuitive graphical interface, compliance with the appropriate standards and the adaptability to replicate an existing SQL-based recipe management system, excellent results in overall performance have been achieved.

MINIMAL TRAINING TIME

Following the completion of Treesse Progetti’s project using zenon, Birrificio Antoniano went from a near-manual production to an entirely automated craft beer brewing process. The increase in production capacity has been achieved at the same time as gaining greater flexibility and ergonomics



Birrificio Antoniano with Treesse Progetti and the software zenon went from a production of 500-liter batches to 2,000-liter batches per day.

“zenon has met all of the project requirements, especially in terms of the graphics applied to the multi-monitor displays, and for recipe management where the structure was imported from another system. The trend and reporting functions were also fundamental to this application.”

STEFANO GASPARINI, TECHNICAL SALES MANAGER AT
TRESSE PROGETTI S.R.L.

in the operators' duties. The staff needed very little training to learn how to use the new applications. This was because the intuitively structured graphical interface was created with high levels of usability, so training time could be reduced to nearly zero.

MULTI-MONITOR DISPLAY

One of the project goals was to be able to manage the entire plant from one single control station. Using zenon, the master brewer now has a control room from where, on the several monitors, he can supervise the entire production process. He can see the status of the recipes being prepared on one monitor. On another, the alarms page is displayed. On another, the complete overview of the entire production line, from the ingredients blending stage to the fermentation process right up to storage, is displayed. All the while, he can keep track of the temperature indicators and the most important production performance levels.

FAST FACTS:

- ▶ Increased productivity
- ▶ Ergonomics
- ▶ Flexibility
- ▶ Intuitive graphical interface
- ▶ Zero training time
- ▶ Multi-monitor display
- ▶ Powerful recipe management system
- ▶ High usability